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"O FORTUNATOS NIMIUM SUA SI BONA NORINT  
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ADDRESS of the Hon. JAS. A. PEARCE,

DELIVERED BEFORE THE

Maryland State Agricultural Society,

AT ITS SECOND ANNUAL EXHIBITION, IN THE CITY OF BALTIMORE,

ON THE 12th OCTOBER, 1849.

GENTLEMEN:—It is with great diffidence that I venture to address you on the interesting and important topics of those agricultural pursuits which must be so much more familiar to you than to me. Though I have always had a passion for rural life, and for the last seventeen years have devoted to it all the leisure which my professional and political pursuits allowed, yet I am little more than an amateur farmer; and am fully sensible that it would much better become me to receive, than to offer, instruction.

But, as I am not a volunteer on this occasion, and have only, within the last week, yielded to your invitation a reluctant consent, you will, I trust, acquit me of presumption, and make liberal allowance for any errors of theory or practice into which you may think I have fallen.

The present century has witnessed vast progress in the arts—in scientific discoveries and inventions applied to the uses of men. Indeed, it seems to be the spirit of the age to extract utility from what was formerly considered abstract and barren science, and to diffuse knowledge among men, by popularizing it. Our century is already distinguished not merely for great discoveries and inventions, such as the application of steam to locomotion, and of electro-magnetism to telegraphs, or beautiful ones like the Photograph, which paints with no other pencil than the light of heaven, but by thousands of minor inventions, which all minister to the wants, real or artificial, of men—which lessen the toil of labour—improve and cheapen the necessities as well as the elegancies of life—diffuse its comforts—ameliorate the condition of those whose fate it is to earn their bread by the sweat of their brows—and even serve to spread knowledge among men to whom its sources were formerly inaccessible.—With the aid of Sir Humphrey Davy's safety lamp, the Miner pursues his once dangerous labours, amidst

the explosive fire damp in almost perfect security. The Steel grinder, whose health and life were soon destroyed by the hard filings which filled his lungs, may now be thoroughly protected by the magnetic gauze mask, which admits the air, but excludes the pernicious metallic dust. The Diver need no longer make the plunge from which he used to rise with the blood gushing from his mouth; but in the tidal diving bell, and with the sub-marine armour, he can safely seek the pearls which "lie under Oman's green water." Vast improvements have been made in printing—in metallurgy—in the manufacture of wool, cotton, and chemicals—And, indeed, in every department of mechanic industry—down to the fabrication of every domestic utensil and every article of personal apparel, the principles of art seem to be better understood, and new and improved processes are employed. But in agriculture improvements have been neither so various nor so rapid. In that great department of industry, which is the nursing mother of all the rest—which is the primary source of national wealth, which chiefly furnishes the raw material to manufactures, and the commodities of exchange to commerce—which, directly, or indirectly, supplies the principal support of government, and without which a nation cannot long sustain its prosperity, and preserve its power, science seems to have shed the least light, and art to have been least emulous and improving. It is true that in Belgium and some parts of Italy a judicious and skilful system of husbandry has long prevailed—that England and Scotland, within the last 50 years, have revolutionized their systems of agriculture, and reached the highest point of known improvement. But in the United States, generally, so swift in the race of improvement, old inveterate and senseless habits of husbandry have been blindly followed, almost down to the present time.

These habits cannot be called systems, since they

have not been formed or regulated upon any just or consistent principles, and have been pursued without even any rational inquiry into the methods proper to be observed.

In our own State the course of tillage generally followed, till within a few years past, has been careless, wasteful, exhausting and inefficient—and habits and prejudices have become so rooted, that the grossest errors have been consecrated, and the most valuable and palpable improvements have either been neglected, or derided as ridiculous.

Ten years ago, I had a tenant who considered himself very hardly treated, when I insisted upon his spreading the lime which I had placed on the farm without cost to him. Another complained bitterly that his lease required him to haul the corn stalks into his farm yard, to be converted into manure, and restrained him from depasturing the young clover in April. But a short time since many farmers considered shallow ploughing as best for the improvement of the soil, and the production of several staples; and I have lately heard a farmer, who is a proprietor and a man of more than ordinary intelligence, pronounce a furrow of *two* inches to be of the proper depth in breaking up a fallow for an oat crop. Marl, which is so abundant in portions of our State, was applied in Talbot County more than forty years ago, with signal benefit: and yet it crept very slowly into general use; and even now there are many farms with beds of it entirely unworked. Fine natural meadows, in many instances, remain uncleared—the coarse grass of the hard marshes, so valuable for manure, is often left uncut—clover is not sown by all farmers, and very few indeed cultivate the true grasses.

That this condition of things is now passing away—that agriculture, among us, has become one of the fields of active and improved art, is chiefly due, I think, to that glorious invention which commemorates all others, which cheapens, diffuses, and perpetuates knowledge—and records, for those who are willing to enquire, all that is valuable in experience, and useful in example—I mean the art of printing. The multiplication of agricultural books, treatises, encyclopedias and periodicals, is quite a feature of the times, and to these the institution of agricultural societies has, I am very sure, been a powerful auxiliary.

To the two may be ascribed the awakened spirit of enquiry and emulation which are now producing such happy results in our State. Within the last few years I have seen many sterile fields (my own among the number) exchange the pale livery of the poverty grass for the rich and fragrant bloom of the clover. On the galled hill sides, where formerly small grain would not grow high enough to be cradled, now waves the thick and golden harvest—the crops of stunted undershot nubbins have given place to the prolific twin corn, with its mass of verdant foliage, and its bountiful deep grained ears.—The once half starved cattle now graze in fattening plenty; and the desolation, which made one heart, sick, as he gazed on poverty-stricken fields, is being replaced by smiling fertility, gladdening the scene, and cheering the soul. What farmer will not rejoice to witness and to aid a progress so beneficial to his class? What patriot will not look with pride and pleasure upon improvements so important to the national weal? For as agriculture must have been simultaneous with civilization, being as necessary to it as the air we breathe to our existence, so the more careful, exact, judicious, scientific,

and honourable, the culture of the soil becomes, the higher will be the refinement, the larger the wealth, the more substantial the prosperity, and the greater the power of any people. And on the other hand, if in any country we should observe a languid and declining agriculture, pursued by imperfect systems, and with diminishing products, we may be assured that the general prosperity and power of that people are on the decline too. Therefore, gentlemen, when you formed the State Agriculture Society, you were not merely preparing agreeable associations for yourselves, and furnishing an inducement for the improvement of your own systems of farming, and so of furthering your individual interests, but you were engaged in a patriotic duty, which I do not doubt will yield fruit honorable and profitable to the country as well as to yourselves. You will collect and diffuse much valuable information—you will make the experience of each available for the benefit of all, by making and communicating the results of experiments to test the value of any alleged discovery, invention, or improvement—by giving and receiving suggestions as to the preparation of the land for seed, the manner of sowing, harvesting, and securing after harvest—the use of new and improved implements—the choice of seeds—the breeding and care of stock, and above all, the preparation, preservation, and application of home made manures—a subject, in itself, of the greatest consequence, as well as of much variety; to which I may add, as only second in importance, the purchase, adaptation, and application of foreign manures and ameliorators. If besides these we consider the business of the dairy, the products of the kitchen garden, vineyard, orchard, and flower garden, any one may see how large a field there is for the investigation of the agriculturist, furnishing him with materials for observation, reflection, study and experiment, enough to engage all his energies; and in connection with the sciences cognate to agriculture, to supply all the intellectual exercise and gratification that the mind of man can desire. The intelligent farmer who directs his energies towards these subjects with the zeal and spirit which begin to characterize his class—who looks at his profession with pride and pleasure, and considers agriculture an art to be associated with, and assisted by scientific enquiry, is as far superior to the silly dandy, who may think him a clod-hopper, as one class of beings can be to another. The one is the prop of the State—the other a trifling excrescence upon it. To the intelligent farmer nature unfolds her beauties as well as her bounties. His is the honest heart, the liberal soul, the ardent mind, the fresh imagination. He makes the best of parents and citizens, the most disinterested of patriots.—Between the well systematized labours of his life are intervals of leisure for general reading and improvement, enough to give him all the information necessary for individual culture, and social enjoyment. That the labours of your society may tend to form such a class of men, to improve your own condition and benefit your country generally, I earnestly hope and believe.

Our State, gentlemen, presents great advantages to the agriculturist. Her situation on the borders of the Atlantic, and the fine navigation afforded by her noble bay, and its numerous tributaries, enable the Maryland farmer to be among the first to reap the advantages of foreign markets; and to supply the demand of the great manufacturing States of the East: while the admirable water power, abounding

in a great part of our territory, has created and must increase, largely, the growth of manufactures within our own borders; thus furnishing us, to a considerable extent, with a steady and reliable home market. Blessed with a fine climate—a soil originally very productive, and quite easily restored to its native fertility, by resources accessible to almost all—we seem to require nothing but a good system of husbandry, energetically pursued, and the practice of a liberal economy, to make Maryland what her local advantages promised she should be, the most desirable agricultural district in the United States.

The course of farming pursued among us for many years, induced, I suppose, by indolence, and encouraged by the high prices, which a long period of war abroad and peace at home afforded for our products, was a rapacious and destructive one. It was a system of exhaustion, which took from the earth, year after year, all that it would yield, and returned to it none of those elements of fertility which we were thus annually diminishing. Finally, in many parts of the country, the soil became greatly impoverished, and there followed a train of evils which we seldom attributed to the right cause. To escape the ravages of the Hessian Fly, we sowed our wheat so late in autumn, that it had scarcely pushed through the earth, before the winter frosts came. Then it was thrown out of the ground by alternate freezing and thawing, until scarcely a root remained fast in the soil. This we charged to the climate and season, saying that the winters were changed, and that the weather was much more capricious, and severe than it used to be,—we forgot that wheat, though not absolutely a biennial plant, is most perfect when winter sown,—when it makes a part of its growth in one year, and flowers, seeds, and perishes the next—that therefore it requires to be sown early enough to form a deep strong root, to resist the winter which it is its destiny to encounter. If it perished from the attack of the fly, we forgot that disease and enemies are just as incidental to vegetable life, as to men themselves, and that we could no more expect the crippled and unfed plant to regain its health and vigor, when left to struggle in the unmanured soil, than we could count upon the wounded soldier taking his place in the ranks again, after he had been left on the desolate battle field, without lint, salve, medicine, or food. If the crop struggled on, in spite of an impoverished soil, slowly ripening to the harvest, and was destroyed by rust, we forgot that early seeding would have given it root, and deep manuring have furnished it with vigour, to escape the evils of late ripening, protracted till the moist hot weather had developed this last enemy of our great staple. Here let me remark that our wheat is often sown in land very poorly prepared for it—not deeply broken, so as to be mellow for at least seven inches, in depth—nor with the furrows regularly and evenly laid over. Much of it is sown amongst the standing corn—in which the foxtail and crab grasses have grown leg-high, so that no skill of the seedman or ploughman can avail—some of the seed being covered with little mountains of earth and grass through which the plumes never can penetrate, if heat enough should reach the seed to produce germination: other grains are often so slightly covered that the first rain uncovers them, while a river of water furrow runs between two rugged, ridgy margins of grain bearing soil. It is a matter of much importance too that the grain should not be deposi-

ted more than about 2; to 3 inches beneath the surface, experience having shown that, when sown below that depth, the plant is not so vigorous, and does not tiller so well.

The farmer of Otwell, and others of his school, will pronounce my notion of early seeding an abominable and destructive heresy. But my own experience satisfies me that, if the ground be well prepared, and the weather be suitable, the September sown wheat, in spite of the Hessian fly, will *cateris paribus*, outcrop that sown in October. However this may be, and though it is true that the farmer has his enemies among the insect tribes, and in the vicissitudes of the seasons, I firmly believe that there are none against which he cannot, in general, successfully contend. If we are not pretty well fortified against them, it is the fault of our forefathers and ourselves, they having exhausted the ammunition with which this war is to be carried on, and we having neglected to repair the waste of which they were guilty. All of us have, in greater or less degree, the means of replenishing our armory; or, in plain terms, all of us may, by labor and care, slowly, and by the application of capital, rapidly, renew those fertilizing elements of which our soil has been robbed by bad tillage.

Foremost in the list of means for improving our worn-out soils, I reckon lime and calcareous earth or marl. I have used a great deal of lime myself, and have seen it applied to every variety of soil on our peninsula; and in no instance has it failed to produce the happiest results. Some of our soils have been ascertained to contain magnesia; and on such, the magnesian limes of Pennsylvania are less profitable than the alum lime of Maryland, or the burnt shells of the bay side. On my own lands, I have used all these kinds of lime, with excellent effect, whether applied to grass the fall before breaking up the land for corn, or in the spring after the ploughing. The latter application I prefer, as giving me quicker returns for the investment, and securing a more equal distribution and better admixture of the lime with the soil. The most striking benefit from lime is seen in the clover which follows the small grain, and which, in almost every season, does not fail to be well set and to flourish, after liming, no matter how poor and exhausted the soil may have been before. My plan has been to keep two fields always in clover—one for pasture, and the other to enrich the land. This, therefore, is not touched by scythe or hoof till after midsummer, when it has ripened, and is falling in masses over the field. This not only shades the land from the hot suns of summer, but furnishes a good coating of vegetable matter, in itself a pretty good manuring. Some lecturers on agricultural chemistry hold that more benefit is derived from ploughing a vegetable growth directly into the land, than by first passing it through the stomachs of animals, by which it is lessened in amount, and deprived of certain valuable constituents. Dr. Baldwin, on the other hand, contends "that the fertility which is always imparted to the earth, by a luxuriant crop of clover, is not in the slightest degree diminished by the removal of the whole crop previous to fallowing," and "that no fertility can be imparted to the soil by ploughing under green crops of any kind;" and in short, that vegetable matter must undergo, before being ploughed under the ground, the putrefactive process, to be of any use. However this may be, the practice of keeping clover growing thickly over the field, till it be ploughed

for wheat, satisfies both theories; for it shades the land, which is Dr. Baldwin's talisman, and it returns to the soil all the vegetable matter, undiminished, by the appropriations of the horses and bullocks of the farm, or by the waste of putrefaction in the barn yard.

But to return to lime. It is, in some places, a popular saying, that lime enriches the father, but impoverishes the son. This saying, like many others which are pronounced as oracles, is but just half right, and is, therefore, deceptive and mischievous. Certainly, the man who should treat his land to repeated applications of lime, without grasses or manures, and should constantly draw from it all the crops it would yield, would, after a time, find his farm less productive than it was before liming. But this is not in the least inconsistent with the true theories of liming, or the position that lime is invaluable, as the basis of every well digested system for improving worn-out lands, not already abounding with that mineral. All crops take away from the soil in which they grow various substances other than lime. These, being all necessary, in greater or less degree, to the perfection of such crops, must be supplied to the land, if not originally in it; and, if not existing abundantly in the soil, they are soon exhausted by repeated cropping. If lime be wanting, and the other fertilizers be present, the addition of lime immediately makes the land productive; but the repetition of its application cannot supply the diminishing stock of the others. Hence, while, under such circumstances, the crops may rapidly diminish, no one ever heard of land deteriorating, which was limed, manured and clovered, at proper intervals. This exhaustion of the soil by repeated applications of lime, without other manures being supplied, has been well compared in an article in Mr. Skinner's valuable work, "the Plough, Loom and Anvil," to the operations of the iron smelter. "He throws into his furnace the ore and coal, but gets no metal till he puts in lime also. He adds a dose of lime, and draws off a running of metal. He adds more lime, and perhaps procures more metal. But he soon finds that lime does no more good—he has melted out all the metal—he has exhausted his furnace—the stimulus of lime has no effect. He must add more coal and ore again, and then he will obtain his regular flows of metal. So it is with the soil. The farmer who hopes, by the continual addition of one thing, to make his land produce continual good crops, hopes and acts against reason." It is very clear that he must return to the soil the other ingredients of the grain which he has carried away, and then its fertility will be renewed. As to the mode in which lime acts upon the soil, and the growth of vegetation, I believe we know enough for all practical purposes, although there is some controversy among the learned on the subject, and some of its chemical effects are either unknown or not yet susceptible of satisfactory explanation. It seems to be well understood that, besides its mechanical effect, in loosening and lightening heavy soils, by dividing their adhesive portions, and cementing those of the sandy sort, it has several chemical effects of great benefit to vegetation. Many believe that it is a direct pabulum, or food of certain plants, in whose ashes it is invariably to be found; and this seems to me reasonable enough. It neutralizes, by new combinations, acids found in many soils, which are hurtful to vegetation, and which sometimes abound in humus, according to the character of the plants from whose

decay it has been formed. It combines with, or decomposes, inert vegetable matter in the soil, so as to give it life and activity, and convert it rapidly into food for plants. This strikes me to be its most important agency. According to Professor Johnson, it has also the valuable "property of causing or facilitating the production of other useful compounds of inorganic matter" (that is matter neither animal nor vegetable), or of so promoting "the decomposition of existing compounds as to prepare them more speedily for entering into the circulation of plants." At all events, experience shows that in any soil where lime does not already exist in sufficient quantity, its application is sure to reward the farmer by the speedy increase of his crops, and the permanent improvement of his farm. Its efficacy does not seem to be limited to any class of soil. I have seen it work miracles upon stiff heavy lands, and upon light sandy land, where there was not 5 per cent of clay. Had I been unable to purchase it for my lands, I am certain that I never should have improved them; for clover almost always failed without it; and manure which now seems to become fixed in the soil, did not exhibit any appreciable effect after two crops. Still, lime is but the basis of improvement in our treatment of reduced lands. The grasses must not be neglected; and, above all, clover, which, in conjunction with lime, is a grand renovator. In truth, I know nothing that can supply its place. Under the dense shade of its foliage, and in the moisture thus preserved at the surface of the soil, some subtle process seems to me to be conducted—some natural chemistry, or agricultural alchemy, which we do not thoroughly understand, but which ensures fertility to the soil. We do know, however, that clover has deep roots, and draws some of its nutriment from the depths of the soil, below the plough's range, and that it abstracts from the atmosphere both carbon and ammonia, in larger quantities than other plants; and so returns to the earth more fertilizing matter than it takes away.

The supply of carbonaceous matter which it furnishes to light soils is of immense value to them, making them more retentive of moisture, while the ammonia which it affords is the aqua vite of growing plants, yielding them the nitrogen indispensable to their growth. Whatever furnishes it to the cereal grains must needs be valuable; and, indeed, the efficacy of manures may be said to vary almost in proportion as they supply this vivifying principle. Clover divides heavy soils, and makes them all more pulverulent and permeable, by the air, from which they derive small, but constant and invaluable supplies of fertilizing gases. The theories on this subject do not all agree, it is true; and it may be that agricultural chemistry is yet but on the threshold of discoveries, which may hereafter silence all controversy on the subject, and explain to us clearly why clover is so great a fertilizer. Certain it is, that it has long been the basis of the Flemish agriculture, which has been carried almost to perfection; and it is enough for us to know from this, and our own unmistakable experience, that either ploughed in, or suffered to fall and die on the land, it never fails to enrich it, and that its effects are peculiarly happy when combined with the application of lime.

The next source of manure, accessible to all, which, in sufficient quantity, is better than all, which contains, in some proportion, all the elements of fertility, which almost every farmer might



increase far beyond the ordinary supply—the careful husbanding and judicious application of which, furnish the best guarantee of successful farming—is the product of the stable and cattle yard, the hog pen and sheep fold.

The barn yard may be called the farmer's laboratory. This is, with us, almost always arranged without any reference to its uses, and in violation of principles so obvious, that it requires no nicety of observation, no acuteness of mind, and no science to point them out. It should be so protected by shedding around its borders, as to throw off most of the rain which would otherwise fall on to it. It would be well to have a large wide open shed, in the middle, so provided with gutters as also to throw the rain water without the yard; and it is highly important to have, at some point, a sink or reservoir for all the liquid contents of the yard—not one drop of which should ever be permitted to escape, by evaporation or other waste, if possible. The most valuable ingredients in the dung heaps are soluble in water, and are readily taken up by the rain which falls in superabundance into the unprotected yard. The invaluable liquid extract of manure thus formed is generally discharged, as if it were waste water. This may be prevented by proper shedding, and by the sink or reservoir before mentioned, and by properly shaping the surface of the yard. I do not think it necessary, as some do, to cover the whole barn yard with roofing, like a rail road depot. This would be a heavy, and I think needless, expense, and would exclude too much the direct light of the sun. Nor do I think the European system of box feeding likely to be adopted, or desirable on our large farms. Fattening bullocks may be kept in stalls till ready for the butcher; but dry cattle and milch cows seem to me to thrive best with more liberty and open air. Open shedding will afford them shelter and warmth enough; and the barn yard being protected, as I have suggested, from excess of rain water, there will be no great waste from drainage and evaporation. When entirely unprotected from the rain, the loss from these two causes has been estimated at 75 per cent. of the valuable parts of the manure. The liquid contents of the yard may be applied, diluted with water, directly to the crops, or pumped over the yard, when more moisture and fermenting stimulus are needed for the decomposition of the refuse straw, hay, leaves and vegetable matter of every sort, of which the barn yard should be the common receptacle. I have myself used the liquid drainings of my farm yard, in a small way, upon a lot of orchard grass, with great effect. The preparation and sale of these fluid fertilizers furnish a regular business in some parts of Europe, where their value is justly appreciated. The liquid voidings of cattle and horses are particularly rich in ammonia, which exists in urine in the shape of phosphate and carbonate. In the condition of carbonate, it is volatile, and flies off into the air. In the condition of a sulphate, it is not volatile, and hence the propriety of strewing the farm yard regularly with plaster or sulphate of lime, or sprinkling it with a solution of coppeas or sulphate of iron—the sulphuric acid forming a new combination with the ammonia of the manure, and yielding the sulphate of ammonia, which is not volatile, but is readily dissolved, and absorbed by the plants with which it comes in contact. To absorb the liquid and gaseous parts of the manure, and to increase and improve the heap, we should add rich earth,

swamp mud, woods scrapings, and peat to the waste vegetable matter in the yard; and the cattle and horses should be fed with rich and nourishing food. Experience and chemical analysis both show the advantages of this, and that the manure of stock fed upon dry and poor food is, by no means, as valuable as that which is made by grain and hay fed cattle and horses. Every farmer, for this reason, as well as for the improvement of his stock, should raise hay in ample abundance. A few acres, well enriched and thickly set in timothy, will yield more to the farmer, in the increased value and quantity of his manure, than the same lands would produce in any other cultivation—to say nothing of the improved value of the stock. Another grass, not used for hay, but invaluable for soiling, is Lucerne. This yields a larger amount of rich green food than any other grass known to me. It is a very early grass, being often fit for the scythe as early as the 15th or 20th of April, and, in deep, light rich soils, continuing to yield prolific crops throughout the season of soiling. I have grown it for ten years, and have cut it four and five times in a year. It is rich and succulent, and better for milch cows than any other grass which is soiled. A judicious and exact friend of mine compared it with clover and orchard grass, by feeding a milch cow with equal weights of it and those other grasses, alternately, during three different weeks, and seeing the animal milked three times a day. The result was, that more and richer milk was given during the week when the lucerne was the only food. I sow it broadcast, with oats, in April, and soil the oats before they ripen. A small lot would enable the farmer to keep his cattle well, in the farm yard, until his clover field was fit to be pastured, and would add largely to the stock of manure.

Another means of increasing the manure heap, and keeping stock in good condition during the winter, is the culture of root crops. I have tried nearly all the varieties of plants which have been recommended for this purpose, but have discarded all but the potato, ruta бага and carrot. The last I prefer, for a variety of reasons. It is easily cultivated, never failing in good land, if the seed come up; and in that, there is no difficulty, if it be fresh, and sown at a proper time. It is quite easily worked, after thinning and hoeing, with the common subsoil plough and a narrow cultivator, and yields large crops of roots, which keep admirably through the winter and spring. It is nourishing to both cattle and horses—gives a fine flavor to butter—keeps the stomach and coat of the horse in excellent condition, and has, besides, a highly valuable medicinal quality—that of curing, or very much alleviating, the heaves. Besides all this, it adds largely to that fund on which the farmer never draws in vain—the manure bank. It may be fed raw to milch cows; whereas, turnips, if one does not wish to taste the gall of bitterness in his butter and cream, must be cooked for them. In short, gentlemen, not to weary you with observations, in which there is much truth, but little novelty, the judicious farmer will spare no labor or pains to accumulate, in his great manufactory of manure, all the animal and vegetable matter which his farm can possibly supply, being assured that no investment of labor, time and money can pay so well as this. I believe that, in this way, one may manure his whole farm over in six years, and this, with lime and clover, will secure the regular and increasing improvement of his land. But the farmer,

culties and ascertained truths of great practical benefit. As little can he question that in its further progress it will remove doubts, expose errors, and develop facts and principles of the highest practical utility. The process by which these results will be arrived at may not and need not be understood by the great body of farmers. But the fruits of such scientific enquiries will be found in our agricultural journals, not buried among technical terms in learned treatises, but made clear to the comprehension of the ordinarily intelligent farmer.

The book farmer may be a thriftless theorist, but the practical man, while he avoids visionary speculations and hazardous experiments, knows how to turn to account the experience and the suggestions

of others. He adopts what is consistent with reason and his own observation—tests what is doubtful, and rejects the inefficient or extravagant. Such a man will read without either credulity or disdain, and, therefore, will be benefitted by what he reads. Indeed, the practical character of most of the agricultural periodicals of the present day is such as to make them entirely acceptable to practical men. In the pages of the American Farmer, the Working Farmer, of N. York, the Plough, Loom and Anvil, and Downing's Horticulturist, such a man will find a periodical library with which he cannot fail to enlarge his information, improve his practice, and both gratify and refine his taste.

## PRIZE ESSAY ON THE CULTURE AND MANAGEMENT OF TOBACCO,

By W. W. W. BOWIE, Esq. of Prince George's Co. Md.

[The Publisher of the AMERICAN FARMER having offered a piece of silver plate of the value of \$30, for the best Essay on the above subject, the Committee, consisting of Messrs. H. G. S. KEY, J. S. SELLMAN, GEO. W. HUGHES, JOHN D. BOWLING, and W. C. CALVERT, of Maryland, awarded the prize for the following Essay.]

A rich loam is the soil for Tobacco plants. The spot selected for a bed, should be the south side of a gentle elevation as well protected as possible by woods or shrubbery—a warm spot—mellow ground, perfectly pulverized. After a thorough burning of brush and tobacco stalks mixed, dig deep, and continue to dig, rake and chop until every clod, root and stone be removed, then level and pulverize nicely with the rake. Mix one gill of seed for every ten square yards, with a quart or half gallon of plaster or sifted ashes, to every half pint of seed, and sow it regularly, in the same manner that gardeners sow small seeds, only with a heavier hand. Roll with a hand roller or tramp it with the feet. If the bed be sown early, it ought to be covered with brush free from leaves; but it is not necessary to cover them after the middle of March. Tobacco beds may be sown at any time during winter if the ground be not too wet or frozen. The best time for sowing is from the 10th to the 20th of March, altho' it is safest to sow at intervals, whenever the land is in fine order for working. Never sow unless the land be in good order, for the work will be thrown away if the land be too moist, or be not perfectly prepared. The beds must be kept free from grass or weeds, until they are no longer needed, and the grass must be picked out a sprig at a time by the fingers. It is a tedious and troublesome operation, therefore planters should be very careful not to use any manures on their beds which have grass seeds or weeds in them. After the plants are up they should receive a slight top dressing of manure once a week sown broadcast by the hand; this manure should be composed of half a bushel of unleached ashes (or 1 bushel of burnt turf), 1 bushel of fresh virgin woods earth, 1 gallon of plaster, half a gallon of soot, one quart of salt dissolved in two gallons of liquid from barn-yard, and 4lbs. of pulverized sulphur, the whole well intermixed. Let a large quantity be got together early in the winter and put away in barrels for use when wanted. This and other such mixtures have been found efficacious

in arresting the ravages of the Fly,—both from the frequent dusting of the plants and the increased vigor which it imparts to them, thereby enabling the plant the sooner to get out of that tender state in which the fly is most destructive to it. The Fly is a small black insect, somewhat like the Flea, and delights in cold, dry, harsh weather, but disappearing with the mild showers and hot suns of opening summer. If possible the plants should stand in the bed from half an inch to an inch apart, and if they are too thick they must be raked when they have generally become as large as a five or ten cent piece. The rake proper for the purpose should be a small common rake, with iron teeth, three inches long, curved at the points; teeth flat, and three eighths of an inch wide and set half an inch apart.

*After culture, &c.*—The soil best adapted to the growth of Tobacco is a light friable soil, or what is commonly called a sandy loam, not too flat, but rolling undulating land—not liable to drown in excessive rains. New land is far better than old. Ashes are decidedly superior to any other fertilizer for Tobacco. Theory and practice unite in sustaining this assertion. The land intended for Tobacco should be well plowed in April, taking care to turn the turf completely under and subsoiling any portions that may be very stiff and likely to hold water near the surface, and let the land be well harrowed directly after the breaking it up; it should then be kept clean, light and well pulverised by occasional working with cultivators and large harrows so as not to disturb the turf beneath the surface. When the plants are of good size for transplanting, and the ground in good order for their reception, the land or so much as can be planted in a "season" should be "scraped," which is done by running parallel furrows with a small seedling plough (the Davis or Woods' Plow for instance), two and a half feet apart, and then crossing these again at right angles, preserving the same distance, which leaves the ground divided in checks or squares of two and a half or three feet each. The holes are then put in

work and the hill is formed by drawing the two front angles of the square into the hollow or middle, and then smoothed on top, and *patted* by one blow of the hoe. The furrows should be run shallow, for the hills should be low and well levelled off on the top, and, if possible, a slight depression near the centre, so as to collect the water near the plant. The first fine rain thereafter, the plants should be removed from the seed beds, and one carefully planted in each hill. A brisk man can plant 10,000 plants per day. The smaller or weaker hands, with baskets filled with plants, precede the *planters* and drop the plants on the hills. In drawing the plants from the bed, and in carrying them to the ground, great care should be taken not to bruise, or mash them. They ought to be put in baskets or in barrels, if removed in carts, so that not many will be in a heap together. The plants should never be planted deeper than when they stood in the bed. Planting is done by seizing the plants dropt on the hill, with the left hand, while with one finger of the right hand, a hole is made in the centre of the hill, and the root of the plant put in with the left, while the dirt is well closed about the roots by pressing the fore-finger and thumb of the right hand on each side of the plant, taking care to close the earth well about the bottom of the root. If sticks are used to plant with, they should be short, and the planter should be particular not to make the holes too deep. The plants should be very carefully planted, for if the roots are put in crooked and bent up, the plant may live, but will never flourish, and perhaps when too late to *replant*, it will die, and then all the labor will be of no avail. In three or four days it may be weeded out, that is, the hoes are passed near the plants, and the hard crust formed on the hills pulled away, and the edges of the hill pulled down in the furrows; this is easily done if performed soon after planting, but if delayed, and the ground gets grassy it will then be found a very troublesome operation. After "*weeding*" out, put a tablespoonful, or a gill if it be preferred, of equal parts of plaster and ashes well mixed, upon each plant. In a few days, say a week or less time, run a small plough through it going twice in a row. This is a delicate operation and requires a steady horse and a skillful ploughman, for without great care the plants will be knocked up or be killed by the working. In a week after the *Tobacco cultivator* or *shovel* must be used. These implements are well made by R. Sinclair, Jr. & Co. of Baltimore. Either implement is valuable at this stage of the crop. But once in a row is often enough for either cultivator or shovel to pass. The crop can now be made with their use by working the Tobacco once a week or ten days, for four or five weeks, going each time across the former working. Any grass growing near the root of the plants should be pulled out by hand. As soon as the Tobacco has become too large to work without injuring the leaves by the spring-tree, the hoes should pass through it, drawing a little earth to the plants when required, and level the furrows caused by the cultivator and shovel. Let this hoeing be well done and the crop wants no more working. Care should be taken to leave the land as level as possible, for level culture is most generally best. When it blossoms, the best plants ought to be selected for seed; one hundred plants being enough to save for seed to sow a crop of 40,000 pounds. All the rest should be "*topped*" before they blossom—indeed as soon as the blossom is fairly formed. It should be *topped* down to the

leaves that are six inches long, if early in the season, but if late, top still lower. If the season be favorable, in two weeks after a plant has been "*topped*" it will be fit for "*cutting*," yet it will not suffer by standing longer in the field. From this stage of the crop until it is in the house, it is a source of great solicitude and vexation to the planter. He is fearful of storms, of frost and worms, his worst enemy—they come in crowds—"their name is Legion"—and the "*suckers*" are to be pulled off, and the "*ground leaves*" are to be saved. The "*suckers*" ought to be pulled off when they get three or four inches long; they spring out abundantly from each leaf where it joins the stalk. "*Ground leaves*" are those leaves at the bottom of the plant which become dry on the stalk and ought to be gathered early in the morning when they will not crumble.

The *Worms* ought to be pulled off and killed as fast as they appear, or they will soon destroy the crop. Turkeys are of great assistance in destroying these insects; they eat them and kill thousands which they do not eat, for it seems to be a cherished amusement of the Turkey to kill worms on Tobacco—they grow passionately fond of it—they kill for the love of killing. There are every year two "*gluts*," as they are called by planters; the first, attacking the plants about the time that they are one third or half grown, the other, comes on when the Tobacco is ready for cutting. The first can easily be subdued with a good supply of Turkeys, and if then they are effectually destroyed, the second *glut* will be very easy to manage, for it is the opinion of many intelligent and experienced planters that the greater portion of the first *glut* reappear the same year as *Horn-blowers* and breed myriads. When the second army of worms makes its appearance, the Tobacco is generally so large that Turkeys do but little good. The only method then to destroy them is to begin in time, start when they are being hatched, and keep up a strict watch upon them, going over the whole field, plant by plant, and breaking the eggs—killing such as may be seen, and by constant attention during each morning and evening to this business alone, with the whole force of the farm, they may be prevented from doing much harm. When they disappear the second time, there is no more cause of trouble. For a full entomological description of the Tobacco worm, and the easiest and most effectual method of rendering them comparatively harmless, I beg leave to refer the reader to a letter written to J. S. Skinner, Esq. by the author of this essay, and published in the Farmers' Library in 1843. When the plant begins to yellow, it is time to put it away. It is cut off close to the ground by turning up the bottom leaves and striking with a Tobacco knife, formed of an old scythe—such knives as often are used for cutting corn. Let it lay on the ground for a short time to "*fall*" or wilt, and then carry it to the Tobacco house, when it may be put away in three different modes, by "*pegging*," "*spear*ing," and by "*splitting*." "*Pegging*" Tobacco is the neatest and best mode, yet the slowest. It is done by driving little pegs, about six inches long and half an inch, or less square, into the stalk about four inches from the big end of the stalk, and these pegs are driven in with a mallet, in a slanting direction, so as to hook on the sticks in the house. It is then put on a "*horse*," which by a rope fixed to one corner, is pulled up in the house, and there hung upon the sticks, which are regulated at proper distances. A "*Tobacco horse*" is nothing more than three

small sticks nailed together so as to form a triangle, each side being three or four feet long. Spearing is the plan I pursue, because it is neat enough and decidedly the quickest plan. A rough block with a hole morticed in it, and a little fork a few inches from the hole for the Tobacco stick to rest upon, one end being in the hole, with a spear on the other end of the stick, is all the apparatus required. The plant is then with both hands run over the spear, and thus strung upon the stick, which when full is taken to the house and hung up at once. There are "dart-spears," like the Indian dart in form, and "round-spears"; either however will answer.

"Splitting" Tobacco is admired by many who contend that it cures brighter, certainly quicker and less likely to *house-burn* or injure from too thick hanging. This mode is pursued easily by simply splitting, with a knife made for the purpose, the plant from the top to within a few inches of the bottom, before it is cut down for housing. Care should be taken not to break the leaves while splitting the stalk. The knife for splitting may be fully described by saying it is a miniature spade. It can be easily made out of an old scythe blade, inserted in a cleft white oak handle, with its edges bevelled off to the blade, so that it acts as a wedge to the descending knife. After the Tobacco is split, cut down and carried to the house, it is straddled across the sticks and hung up. The sticks are generally supported by forks driven in the ground near the heap of Tobacco, for greater convenience to the person putting on the plants.

Tobacco sticks, are small round sticks, or are split out like laths, and are about one inch square, or one and a half inches square, usually larger at one end than the other, and they should be eight or ten inches longer than the joists of the Tobacco house are wide apart. If the Tobacco is of good size six or seven plants are enough on a four foot stick. When first hung up the sticks should be a foot or fifteen inches apart. As the Tobacco cures they may be pushed up closer. After a house is filled, some planters put large fires under it, as soon as it has turned yellow, and by hot fires it is dried at once and does not change color, unless to increase its brightness, but "firing" gives a smoke, smell and taste that is therefore not much liked by buyers. The cost of labor and loss of wood, and the risk of losing Tobacco, and the house too, are great objections well urged against *firing*. The better plan is to have sufficient house-room and hang it thin in houses not too large, which have windows and doors so as to admit light, and dry air, and by closing them in bad weather exclude the rain and dampness which materially damage the Tobacco, beside injuring the color of it. After becoming dry and well cured, the stem of the leaf being free from sap, the first mild damp spell of weather it will become soft and pliant, and then be stript off the stalk. It is first pulled, or taken off the sticks and put in piles, then the leaves are stript off and tied in bundles of about one fifth or sixth of a lb. in each. The bundle is formed by wrapping a leaf around the upper part of the handful of leaves, for about four inches, and tucking the end in the middle of the bundle by way of confining it. There ought, if the quality of the crop will permit, be four sorts of Tobacco, "*Yellow*," "*Bright*," "*Dull*" and "*Second*." When the Tobacco is taken down, the "*cutters*" take each plant and pull off the defective and trashy ground and worm-eaten leaves that are next to the big end of the stalk, and then throw the plant to the next per-

son, who strips off all the *bright* leaves (and if there be any yellow leaves, he lays them one side until he has got enough to make a bundle,) and throws the plant to the next, who takes off all the rest, being the "*dull*," and the respective strippers as they get enough leaves in hand, tie up the bundles and throw them separate for convenience in bulking. Stripping should never be done in drying, or harsh weather, unless the Tobacco is bulked up almost as fast as it is stript. The best plan is not to take down more than you can conveniently tie up in a few hours, but if the planter chooses he may take down a large quantity and put it in bulk, stalks and all, cover it with Tobacco sticks, and it will keep many days, so that no matter how the weather be, he can strip out of the bulk. However, this is a very bad, wasteful way. Tobacco should not be too moist or "*high*" as it is termed, when put in the stalk-bulks, or it will get warm, the leaves stick to the stalk, get a bad smell, and change color; beside, if left too long it will rot. To "*bulk*" Tobacco it requires judgment and neatness. Two logs should be laid parallel to each other about thirty inches apart, and the space between them filled with sticks, for the purpose of keeping the Tobacco from the dampness of the ground. The bundles are then taken one at a time, spread out and smoothed down, which is most conveniently done by putting it against the breast and stroking the leaves downward, smooth and straight with the right hand. It is then passed two bundles at a time to the man bulking. He takes them, lays them down and presses them with his hands; they are laid two at a time in a straight line—the broad part of the bundles slightly projecting over the next two, and two rows of bundles are put in a bulk, both rows carried on together, the heads being on the outside and the tails just lapping one over the other in regular succession. The bulk when carried up to a convenient height should have a few sticks laid on the top to keep it in place. It must often be examined, and if getting warm, it ought to be immediately changed and laid down in another bulk, of less height, and not pressed as it is laid down; this is called "*wind-rowing*," being loose and open, it admits the air between the rows of bundles, hence the term. The next process in this troublesome but beautiful crop is to "*condition*" it for "*packing*." The *bright*, *yellow* and *second* Tobacco will condition best most generally in such bulks as I have just described, but it is best to hang up the *dull* as soon almost as stript. If the bright or seconds do not dry thoroughly in the bulks, that should also be hung up in the house to become well dried. To properly hang up Tobacco to condition, small sized sticks should be procured, and each one nicely smoothed with the drawing knife and kept for that purpose. After it has once been perfectly dry either hanging up or in bulks—so dry that the heads are easily knocked off and the *shoulders* of the bundles crack upon pressure like pipe stems—it should be taken down, or, if in bulk, removed the first soft giving spell of weather, as soon as it is soft and yielding enough, as it will become, to handle without crumbling or breaking, and it must be put in four, six or eight row bulks of any convenient length and height, the higher the better—laid down close so that as little of the leaves or shoulders as possible shall be exposed on the outside of the bulks. When completed, put sticks and logs of wood, &c. &c. on the top, so as to weight it down. Here it will keep sweet and in nice order for packing at any time, no matter what the weather may



be; if it was conditioned properly, it will not change a particle while in the *condition bulk*. Mild, soft, pleasant weather is the best to pack Tobacco in. The best Tobacco prize is one known as "Page's Prize," but was first invented by the Rev. Mr. Aisquith, and improved afterwards by Page, at the suggestions of practical planters. It is very cheap, expeditious in its working, and being easily taken down and put up, may with convenience be moved from house to house.

As to the size of the hogsheds, the best size is the ultimatum of the law, forty inches in the head and fifty-two in the length. Almost any wood will answer to saw into hogshed stuff, the best, of course, is that which is strong but weighs light, such as gum or beach, or birch or poplar. No hogshed ought to weigh over 100 lbs. and staves drawn out of red oak, or other oaks, which make the best hogsheds, but are too costly, ought not to weigh over 90 lbs.

Having now got our Tobacco in good order, our prize and hogsheds ready, the first mild day that we can spare, we proceed to *packing*. Let me here observe that while putting the Tobacco in condition bulk, all the bundles that were *soft*, or had an ill-smell, ought to have been laid aside to be made sweet and dry, by a few hours exposure to the sun. The same precaution must be observed while packing. In putting the Tobacco in the hogshed for packing, a man gets inside, *shoes off*, and lays one bundle at a time, in a circle, beginning in the middle, and each circle is extended until the outer circle touches the staves of the hogshed; a single row of bundles is then laid all round the edge on the heads of the last circle, then across the hogshed in parallel rows, the middle being always raised a little higher than the outer edge. This is called a *course*, and these *courses* are continued until the hogshed be filled. The man who is packing, presses with his knees each bundle, in each course, as he lays it, and often stands upon his feet and tramps heavily but cautiously, all round and across, so as to get in as much as possible. One receiving hogshed and two false hogsheds five feet long, making fourteen feet four inches of Tobacco, will weigh from nine hundred to one thousand pounds if well hand-packed, and in fine order. This concludes the almost ceaseless round of labor that is necessary to prepare for market this important staple of our country. It will be seen that I have endeavored to be as explicit and plain as possible, and have studied the greatest simplicity of style, supposing that to be the most suitable to the subject under consideration.

Planters in Maryland should grow less Tobacco, and thereby improve its condition and quality. By that means they would require less house-room, fewer hands, less land, and receive more money for what was made. It is no uncommon occurrence for planters to fall short say 15 or 20,000 pounds in a large crop, yet receive more money for the residue than they got for the additional 20,000 lbs. the year before. The reason is, that *not being* pressed for room, it cured better, and they managed it better throughout its various stages, and consequently got a greatly increased price for it. That too is one reason why small crops invariably out-sell large crops, by several dollars per 100 lbs.; the other reason is, that small crops are rarely subject to drafts that must be met even if it be by forced sales. As a striking instance of the uselessness of pursuing a practice of *overcropping*, which too many of the largest planters are constantly following to their great

loss from year to year, and to the detriment of their neighbors by glutting the market with *trash*, I will mention a circumstance which made an impression on me the past year. Two gentlemen had each very fine crops of Tobacco, so equal in appearance that there might be said to have been no difference in the product per acre as it stood, just when fit to top; but one had 220,000 hills, a small force in proportion to his crop, and scarce of room, having to haul some of it two miles to a neighbor's house. The other had only 160,000, plenty of room convenient to the Tobacco ground, and a large number of hands to manage it. The latter gentleman made several thousand pounds more than the first, and it will average a larger sum per 100 lbs., taking the crop through. The reason is obvious, for in this crop, every leaf was saved, none lost by worms, nor by "*house-burning*," (that is suffering, or even rotting from being hung too thick,) nor loss by distant transportation; nor by that unavoidable waste, which is the sure accompaniment to hurry and over-work in the securing of any crop. To all these disadvantages and losses the other crop was subjected.

One word more, by way of advice, to the planters, will not I hope be considered out of place here. *Never draw a draft upon the Tobacco which you consign to your commission merchant.* Fix a value upon it yourselves, and refuse to take less for it than you think it worth, unless you are necessitated to sell, and then sell before it be known that you are compelled to sell. The chief rule of the *buyers* of Tobacco is, I believe, in fixing the *price*, not founded upon the European demand, but the demands of the planters upon their merchants through the banks; and by that means the buyers are constantly kept advised of the necessities of the planters as individuals as well as a community, and they reduce the price of the article according to the urgency of the wants of the planters. I think it would be advisable, at least, a safe *experiment*, for a sufficient number of the largest planters to establish an agency in some European market, and charter a vessel annually to take out their crops. The agent should be a practical planter, and be also an American citizen. His agency should cease, at the farthest, in five years, lest he become contaminated, and commence speculation on his own hook, as is too often the case with our commission merchants, who both buy for the *consumer* and sell for the *producer*, yet maintain their integrity, altho' no doubt it is sometimes inconvenient to the *conscientious*, who perhaps find it a stumbling-block in their religious pathway.

I conclude with expressing the hope that this humble essay may be favorably received by the planters of Maryland, and should any of the suggestions it contains be found of value hereafter to any individual, the highest gratification will be experienced by the author; and he will feel himself amply compensated for his labor and trouble, by the delightful reflection that he had contributed a small share to the advancement of the great planting interest, and thereby been of some use to his countrymen.

The Howard District Advocate, says, that Mr. B. Fort has left with the editor, a bunch of rye, grown on his place, consisting of *one hundred and ten stalks*, some of which are six feet, six inches high, grown from a single stalk. Also a stalk of corn, 8 feet 3 inches high, and 6 inches in circumference, which "*tops all*."

## SUBDIVISION OF FIELDS—ROTATION OF CROPS.

KING GEORGE COUNTY, Va., Sept. 10, 1849.

To the Editor of the American Farmer.

SIR:—In the 5th vol. of the American Farmer, No. 3, for the month of September, 1849, I notice that, at the request of one of your correspondents who addressed you from Charles county, Maryland, you are pleased to invite some one to answer an enquiry of his, as to the best mode of dividing a farm, having in view the raising of clover for the improvement of the land, the keeping a good pasture, at least, for milch cows, and economy of fencing. Availing of your invitation to do so, I shall, after some preliminary remarks pertinent to the subject, suggest to your correspondent a mode which, in my humble judgment, to all practical ends, would best subserve the objects of his enquiry—an enquiry into a matter which I think involves considerations of *vital interest* to all farmers; and yet there is nothing as to which a greater variety of opinion and practice exists, than as to the most beneficial mode of subdividing a farm, *primarily* designed to produce grain. Accordingly, some adopt three subdivisions of the productive portion of a farm; some adopt four; some five; and some even six—*two only* of which subdivisions annually yield a crop of corn and wheat; so that, as the case may be, one-third, one-half, three-fifths, and four-sixths of those subdivisions, *all under separate enclosures*, remain unproductive, till by a protracted rotation a crop of corn and wheat are taken annually from two of them; and these several plans are adopted, I respectfully think, in the erroneous belief that land derives *direct benefit* from rest. And to illustrate the error of all such subdivisions and culture of a farm, I assume, what must be admitted as correct, that it is as much the interest of him whose *capital is land*, so to manage it as to derive profit from *every acre of it annually*, in some form or other, as it is to the interest of him whose *capital is money*, so to manage as to render every dollar of that capital annually profitable to him; and that a moneyed capitalist, who should annually lock up, or otherwise keep in an unprofitable condition a large portion of his capital, would, by common consent, be considered a fit subject for a lunatic asylum. In the same category should every landed capitalist be, who allows, as by the several arrangements indicated above, such large portions of his land to remain annually unproductive; and to that may be added large portions of many tracts of land which, *for the want of an inclosure*, are not even in the legal nor beneficial possession of him who has vested his money in it, no doubt with a view to profit. I also assume, that all who acquire land to be devoted, as a *primary object*, to the production of wheat, corn, and clover, and to the support of as much stock as may be necessary to the operations of such a farm, and for domestic use, should reduce it to his *actual possession*, by the erection of a good fence on its boundary lines, as described in the deed. That being done, the next thing should be to decide what portion of the land was to be devoted to the production of wheat, corn, and clover; that portion to be enclosed by a fence around it, and to be laid off into three parcels, or shifts to contain the same number of acres, and to be prepared for the following rotation of crops: wheat after clover; corn after wheat; clover after corn; so as to derive profit from every acre of the land, devoted to produc-

tion, annually. To prepare these three shifts for the above *permanent rotation*, one of them being prepared in due time, and having put on it at *seed time* all the manure which the farm can supply, and as much lime as may be deemed necessary, must be sowed in wheat well brined and rolled in lime, by or before the 15th of September, 1849. In the spring of the year 1850, one other of these shifts, being first, in due time, well limed, is to be put in corn; and after the cultivation of the corn is complete, say about the last week in August, that shift is to be sowed in clover, the seed to be harrowed in, and dressed over with Plaster of Paris, at the rate of one bushel to the acre; and the same quantity of Plaster to be given to that clover in the spring of the year, 1851, as soon as it begins to germinate. In the spring of the year 1850, the remaining one of the aforementioned shifts, being well prepared and suitably dressed over with lime, to be sowed in oats, well brined and rolled in Plaster of Paris. Early in August, 1850, the shift from which oats have been taken as above directed, is to be well ploughed, and having put on it at *seed time*, all the manure which the farm can supply, and as much lime as may be deemed necessary, is to be sowed in wheat, well brined and rolled in lime, by the middle of September, 1850. In the spring of the year 1851, the shift, from which wheat was taken in 1850, is to be put in corn, having been suitably dressed with lime; the corn to be followed by clover in the manner directed above. In all July, 1851, the shift that was, in 1850, put in clover after corn, is to be well ploughed, and, at *seed time*, having all the manure the farm can furnish, and as much lime as may be deemed necessary put on it, is to be, by the 15th of September, 1851, sowed in wheat well brined and rolled in lime; thenceforth, corn is to follow wheat; clover to follow corn; and wheat to follow clover; each crop to be managed annually as above indicated. After two such rotations the land will become so well supplied with vegetable pabulum as to allow the first crop of clover to be taken off for hay; and thus *every acre* of the land devoted to production *annually profitable*. And so to manage as to render every acre of the residue of the farm annually profitable, I suggest, that it should be divided into four nearly equal parcels, and put under separate enclosures, as a provision for so much stock *only* as may be *necessary* for the operations of the farm for domestic purposes. Every acre of those lots that can be made arable, consistently with a due reserve of timber and wood, is, under a system of annual rotation, to be cultivated in peas, beans, potatoes, turnips and oats, to be followed by suitable grass seeds. While one lot is thus devoted, the other three are to be given to the stock as pasture, also by rotation, at the rate of one week at a time; which after the first rotation will afford the grass in each lot a *rest* of two weeks at a time during the spring, summer and fall; and while a difference of opinion exists as to the direct benefit which land derives from *rest*, all know and must acknowledge the benefit to grass from having stock kept off it but for a few days. These lots, thus managed, and having the benefit of the manure of the stock while on them, aided by a moderate addition of lime, could not fail, after two rotations, to answer amply all the purposes to which they are designed, and thus be, every acre of it, *annually profitable* to the owner of them. It is according to the above plan, that a tract of land, *primarily* designed for the production

of wheat, corn and clover, and for the support of necessary stock *as an incident*, may be so divided and managed as to render *every acre of it annually profitable*; and that without a diminution of the vegetable pabulum in it, or an undue increase of the fences which are indispensable in all judicious and profitable farming operations. It may, and no doubt will, be objected by some, certainly by the advocates for giving *rest* to land, that the continued succession of corn after wheat must necessarily exhaust the stock of vegetable food in the land. The answer to that objection is to be found in the fact, that the earth is nothing more than the *receptacle and depository*, in fact the *nursery* of all the animal, vegetable and atmospheric material necessary to the growth of plants; which material when digested and decomposed in the earth by heat and moisture, and held in solution by rain, is by the earth, as a *kind nurse*, fed away to plants, by means of their roots. Hence it is *as necessary*, in some form or other, in order to obtain a vigorous crop, to supply it, through the *medium of the earth* on which it is to grow, with a sufficient stock of food, as it is to feed the cow well, in order that she may furnish, *through her teats*, to her calf, a due quantity of milk. And as all experience shows, that the horse and the ox, when well fed and sheltered may be constantly worked without injury, so may the land be annually. This being so, nothing is more certain, than that the bountiful stock of vegetable matter which succeeds a crop of wheat after clover, when turned into the land, when decomposed and held in solution, and aided by atmospheric inhalations, will afford an ample stock of food for a crop of corn. And none can doubt, but that a crop of clover turned into the earth, not only furnishes an ample stock of food for a succeeding crop of wheat on it, but that much of it remains, not only to feed the crop of corn after the wheat, but even the clover after the corn; in aid of which, however, the Plaster of Paris on the clover, as recommended, will make all as it should be, and so continue it to the end of time. The plan, thus suggested, may be objected to by some on account of the extra labor in preparing land for wheat after clover, rather than after corn. There is more apparent than real truth in this objection, when *all the operations* of a farm are taken into the estimate, as they surely should be, with a view to economise labor. Nothing is more certainly true, than that the extra labor, in preparing land for a crop of corn, after it has been at rest and trampled on by stock two or three years, beyond what would be required after a crop of wheat, far exceeds the extra labor in preparing land for wheat after clover. But admitting this objection to be well founded, to some extent, nothing is more certain, than that the same land put in wheat after clover will produce at least one-third more than after corn, and leave the land in a vastly more healthy condition, free from cut-worms and many other reptiles and insects which take possession of land at rest, to the great injury of the corn, which is the invariable crop adopted to arouse it from rest. Others there are who advocate this plan of resting land, that it may be trampled on by stock, in order to prevent it from becoming too light and spongy. A heavy roller put over the land is the proper remedy for it when in that condition, and that robs the land (as the stock do) of none of its vegetable food.

In conclusion, all who own and cultivate land, should constantly bear in mind, as it respects land,

there is one general rule *without exception*; it is, that land is fertile or not, exactly in the ratio of its *absorbency*. Therefore it is to that condition which every farmer should bring his land; always bearing in mind, that the more he increases the absorbency, to the same extent he adds to the fertility of his land. Such will certainly be the result, whatever gentlemen may think who advocate the grazing process under the extraordinary philosophy, that the hoof of the horse and ox communicates fertility to the land on which they trample.

### EXPERIMENTS WITH GUANO.

BY DR. DUPUY, OF PETERSBURG, VA.

*To the Editor of the American Farmer.*

Dear Sir,—It is but fair that those who reap the benefit of other men's labour should in turn contribute their portion. It therefore gives me pleasure to do, what in justice I feel bound to do.—When you requested me to furnish you something for publication in your September No. relative to my operations with Guano, I was very much indisposed, and continued indisposition, with the necessity of a trip to the mountains has delayed a compliance with your request till it is perhaps too late to answer your purpose for this season. Of this however, you must be the judge.

In the autumn of 1844, the use of Guano began to attract attention in our part of the country, and I was disposed to test its value by a few experiments on a small scale. You will bear in mind that at that time the only mode of application known or thought of with us, was on the surface. No one would have been so rash as to turn so light a manure any depth under the earth. I therefore made my first application on the surface to my young turnips in August, on either side of the drill. Here the effect was very short-lived, as in all surface applications. In October (23d.), of the same year, I made three applications to my wheat just after it had come up, under the following circumstances, viz: 40lbs. guano and half bushel of Plaster to the 5th of an acre. On an adjoining 5th of an acre, I applied 40 lbs of guano alone—and on another 5th of an acre 40lbs Guano and half bushel dripped ashes, all joining. I saw very little, if any difference in the three applications, though the wheat upon the whole of them was superior to the neighboring wheat which had nothing applied. This difference continued for some months, but like other surface applications it soon passed away. The following April (2d) I applied 100 lbs. guano and 1 bushel of plaster to half an acre of the same field of wheat. As in the former experiments the wheat grew much more vigorously, and matured earlier, the ripening having been effected before the impression wore off. I submitted a portion of it to weight in the sheaves when it was cut, with an equal portion along-side, which had received no guano, and the increase was about 30 per cent. So far the results were not remunerating, as no benefit could be seen upon the clover, and the effects upon the crop were on the whole too evanescent to justify a continuance of the article, and I should have used it no farther if intelligence had not been received in the winter '46 or '47, that some of those enterprising farmers about Sandy Spring, Maryland, had derived great benefit from its use by introducing it some inches below the surface. As far as I am informed they

are entitled to the credit of first using it in that way. Upon the faith of this new light on the subject, I again determined to make other experiments, and on February 25th, 1847, began the following, on several sections of land joining each other for corn, thus:

No. 1—Manure from farm-yard and then fallowed; subsequently, guano applied at the rate of 250 lbs. per acre and harrowed in.

No. 2—Fallowed at same time as No. 1, without manure. Guano at same rate and harrowed in.

No. 3—Guano at same rate, ploughed in 5 or 6 inches deep. No manure.

No. 4—Had neither Guano nor manure, but was of better quality than the other fields. It was the site of a hedge-row of long standing, and had been enriched by drippings from the stock. I think it would have yielded twice as much as either of the others.

Products—No. 1 yielded 44 bushels to the acre.

No. 2	"	41 $\frac{1}{4}$	"	"
No. 3	"	41 $\frac{1}{4}$	"	"
No. 4	"	33	"	"

The above experiments encouraged me to continue a farther use of the article, and consequently I applied it in the seeding of my wheat in October, 1847, 250 lbs. per acre to my corn ground, and 200 lbs to a field of wheat stubble. The land was fallowed and the guano was applied and harrowed in with the wheat. With my present views and experience I should get it in deeper. I would here remark that if brought in immediate contact with wheat, corn, or any other grain, it will destroy the germinating property: this however I think is prevented by the action of the harrow in mixing the earth and separating the wheat and guano. The result of this experiment was not entirely satisfactory, having averaged only about 8 or 9 bushels to the acre throughout. It is true it was an unfavorable season with me, and that my most indifferent field. Notwithstanding however, it is but just to state that the favorable effects of the guano upon the wheat could have been seen to the furrow, and the subsequent growth of clover has been equally striking. For want of a sufficient quantity of open land, I shall be compelled to put the same field in wheat this fall, on which the guano was used in the above named experiments; and if I use it again, as I have some thought of doing, I hope to have better results, of which I will report. The failure on the former occasion must mainly be ascribed to the season, as a portion of my farm joining, even with the disastrous frost of last spring, and without guano, averaged 16 bushels to the acre, and although superior in quality, that fact was still not sufficient to account for the difference in product.

I have seen guano applied with peculiar and striking benefit to oats, and I have used it on most of the garden vegetables to advantage. I am not a grower of Tobacco, but have had such representations of its success, that if I grew that crop, I should employ it with the utmost confidence, applied under each hill. A combination of moisture with the guano is absolutely necessary to its success, hence the importance of putting it under the surface, as also to prevent the escape of the ammonia so necessary to the growth of the crop and to the fertility of the soil.

That guano is a powerful and active manure there can be no question. Its durability is the only doubt about its value, and that I hope will be soon tested. If, however, it should appear that its effects are not

permanent, still it might be a valuable applicant on account of the quick return upon the investment.—If the hopes of its best friends should be realized, I think not the least of its advantages will be, that smaller farms can be made comparatively more valuable than larger, inasmuch as fewer rotations, and a quicker succession of crops can be adopted. The interest on the purchase of a large farm might be expended annually in the purchase of guano. It appears to me, moreover, that it is a fertilizer peculiarly adapted to those portions of country which have not access to lime, marl and plaster, as the product is not in proportion to the fertility of the soil to which it is applied, being almost as great on poor as on fertile soils.

Very respectfully,  
W. J. DUPUY.  
Petersburg, Va. Oct. 13, 1849.

For the American Farmer.

#### AGRICULTURAL ECONOMY.

The best system of agriculture is that which produces the largest profit on the capital invested. In this I reckon the price or value of the land, the buildings, manual labor, enclosures, horses, oxen, and implements, and the value of the services rendered by the proprietor.

Success in farming can never be realized, unless the means be adequate and judiciously applied.—Many cultivators, when they pitch their crop, determine their course of cultivation, and pursue it, without reference to time and season, and are satisfied if their plan be carried out. If Indian corn be permitted to make much growth, before it is thinned, or grass takes a strong growth, early in the season, the damage is never repaired; or if a fallow be not flushed and well prepared at least four inches, before the wheat is sown, it generally suffers from the winter's frost or the spring fly. I delay sowing till the weather becomes cool in October, and then put in my wheat with all possible despatch, and it rarely suffers from the fall fly. In this I differ from the instructions of the American Farmer, and many judicious cultivators. This summer the drought was very severe in this region; and particularly grievous in this district. The ground was so hard in August when I commenced breaking my fallow, that I despaired accomplishing the work by horse power. I keep a large force of oxen, for drawing marl and other manures, and I started ox ploughs, in addition to my horse, by which I accomplished the work. Oxen are rarely used here for the plough, but I found their performance very satisfactory; they require the additional service of a boy to drive the fore team; even in hot weather, four oxen with a suitable plough broke more ground in a day, than three horses. Breaking my grounds in the spring for corn, and in the summer for wheat, is my most difficult operation on the farm by horses. My usual number is fifteen, and after the ground is broken, all the work could be performed by ten. Horses on a farm are a sinking fund, oxen an improving one. I break all my young steers to the yoke at three years old, and after rendering good service they double their value at six. Last winter I sold four yoke, (a surplus) for sixty dollars a pair.

A farmer who has profits at the end of the year, beyond his expenditures, will find the best investment he can make is in the improvement of his farm. The means of improvement is a question still unsettled. Mr. Chappell has produced some respectable certificates in behalf of his salts; but



the experience of the present year and the analysis of our State Chemist is against them; perhaps the failure has arisen from want of a proper apportionment of the constituents. A receipt for a good pudding may fail, if the condiments be not used in their proper proportions. The wonderful effect of Guano upon poor lands, cannot be controverted—why it should not be found equally beneficial on land of a better quality, is a problem which has not been solved; whether guano will be lasting in its effects will be tested by experience. The good and lasting effects of calcareous manures, are now fully established. Mr. Ruffin (to whose theories I pay great deference) alleges them to be indestructible, and that lands which have remaining in them vegetable matter, or exhausted lands improved by putrescent manures, under a mild system of cultivation, will continue fertile; and such is my experience. Twenty years ago I applied blue marl to a field which had not been exhausted by cultivation, and the product has not failed. For experiment, I applied marl to part of it in 1847, and grew corn on it in 1848, and I could discover no difference in the growth of the corn on the land marled a second time. On this field I have sown wheat this year, and shall be able to see if the durability of marl holds good in the wheat crop as well as on the corn. Our State Chemist who has rendered good service on the Eastern Shore, has found Lime in considerable quantity in the substratum of some of our lands; where none remained in the soil. I have conjectured that it was originally there, but has been exhausted by long cultivation. Lime or marl might remain in the soil for fifty years, but exhausted in one hundred; perhaps the deep ploughing of Mr. Stabler and others, by which their lands were improved, is referable to lime in the substratum. I cannot think a cold neutral clay, or sand, could impart fertility to lands of the same qualities.

I this year grew wheat, of five varieties. The old white Washington, red bearded, Mediterranean, the blue stem white, and a few bushels sent me by my friend Mr. Roy of Matthews county, Virginia. None of my wheat suffered by fly, rust or scab, but there was a great failure in the product of the two first; the others afforded a good yield, but the Virginia wheat greatly exceeded in product. Last year Governor Grayson, in whose neighborhood I reside, obtained from a Mr. Nelson, who resides in the high lands of Harford County, a few bushels of wheat, called there the Mountain White, said to resist the Hessian Fly—he sowed in the month of September, and the white blue stem on each side—the blue stem was damaged by the Hessian Fly, the Mountain white escaped.

I have this year put in part of my wheat, with Pearson's Drill,—at moderate regular work, one acre can be sown to the hour. I witnessed a trial of Maynard's Drill, at Mr. W. H. D. C. Wright's. She seemed to work well, but my observation was too transient to pronounce on her value. I think the Drill will be of great advantage in a wheat growing region, if the inventors would moderate the price. It is a salutary rule, which applies to all vocations, that moderate profits in large business, leads more certainly to fortune, than small business with large profits.

The advantage of the Drill is found in the labor it saves, the diminished quantity of seed, and the increased product. Last year I sowed a highly improved field at the rate of one bushel and three pecks to the acre, which I covered by the plough;

my son, whose farm adjoins mine, with the Drill, used but one bushel and one peck. The natural qualities of the soil differ but little, mine has been longer under improvement—his product to the acre was larger than mine. I have supposed that the superior benefit of Drill sowing may be referred to these causes. It is impossible for the most expert seedsman to place each grain in its proper place; some of the seed will fall too near to each other, some too far asunder. The disadvantage is increased by the application of the plough; some seed is covered too deep to germinate, and some remains exposed on the surface and perishes. By the Drill, if it be in good order and under good management, each seed is placed at its proper point, and none fails to germinate, but such as are defective. The seed is nine inches apart one way, and the lateral roots are not disturbed. According to modern theory, plants derive great support from the atmosphere, and the distance each row stands from the other affords free and unobstructed circulation.—The Drill is well suited to our level country, where there are neither stones or stumps to obstruct its progress.

In my recollection, by means of improved Plows, Harrows, Wheat Threshers and Reapers, Corn Shellers and Fans, manual labor has diminished and moderated largely. There is no region in the United States, where the expense of agriculture is less, and the cost of transportation to market so small; and yet the Eastern Shore of Maryland, has been represented to be in a state of progressive decline, and will, before long, attain that ultimate point of depression, when our people, to avoid ruin, must abandon the homes of their fathers, and seek the fertile regions of the west. From our insulated position, our farming advantages are but little known abroad. Few strangers come among us; such as do, are received with kindness and attention, which some of them ungracefully requite by misrepresenting our habits, and husbandry.

WM. CARMICHAEL.

Wye, Queen Ann's Co., Md., Nov. 1, 1849.

## FARM GATES.

NEAR WARSAW, Va., August 16, 1849.



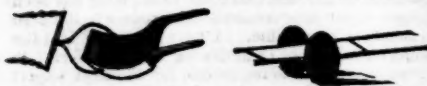
The plan in your No. 2, p. 46, induced me to refer to the American Farmer, edited by Mr. J. S. Skinner in 1830, vol. 1, p. 181, having made several Gates after that pattern, which are "hard to beat."

As for hinges none are better than a piece of bar iron, of almost any size, 8 inches long, bent 5 inches from one end, to form an L, with a hole punched in the short end for a hook, which is secured to the Gate by a screw with a tap, (5 or 6 screws secures the hinge to the post.)

I have used a common latch, to be found in the pine barrens of Anne Arundel county, Md., which may be long or short to suit circumstances. It slides up and down, being thicker in the middle to confine it between the clamps, and its weight keeps it down.

I have also used and am much pleased with cast

iron caps for gate posts, covering enough of the square of the post to secure it with screws or nails.



Every Farmer should have a Dirt Scraper and a Hand Truck. The scraper is to be bought, or can be made of oak boards. I plough my ditch banks, and remove the earth with a boy and scraper, drawn by a mule—mend roads, collect manure, &c., &c. The hand truck is of the wheelbarrow order, and convenient to remove stone, timber, or anything too heavy to tote.

These are labor-saving implements.



BALTIMORE, DECEMBER 1, 1849.

#### TERMS OF THE AMERICAN FARMER.

\$1 per annum, in advance; 5 copies for \$5; 12 copies for \$10; 30 copies for \$30.

ADVERTISEMENTS inserted at \$1 per square of 12 lines, for each insertion. In case of the continuance of an advertisement for six months or longer, a liberal deduction will be made. Address, SAMUEL SANDS, Publisher, At the State Agricultural Society Rooms, No. 139 Baltimore st. over the "American Office," 5th door from North-st.

#### ADDRESS OF THE HON. JAMES A. PEARCE.

The Address delivered before the *Maryland State Agricultural Society*, at its late Fair, by the Hon. James A. Pearce, will be found in our journal of this month, and we take peculiar pleasure in directing the attention of our readers to it. It is a production alike worthy of the eminent character of its author, and the Association before whom it was delivered. The views and doctrines which it inculcates are as perspicuous as they are sound; they are marked throughout by force of reasoning and unmistakable evidences of practical good sense, enlarged views of policy, and a thorough acquaintance with the art and science of agriculture. It will be read, we feel assured, not only with interest, but with profit, by every one who takes that delight, which all farmers should, in adding to the knowledge of their occupation.

#### PRIZE ESSAY.

The Essay in our columns to-day, on the culture of Tobacco, is an able and highly important paper. Its author, W. W. W. BOWIE, Esq., of Prince George's County, is one of the best planters in our State. The reader will perceive, that he has treated the subject in a plain common sense style, so that "he who runs may read," and he who reads may understand—just in the way all agricultural treatises should be written. The Essay will be found to treat the subject in its amplest form, from the preparation of the seed bed, to the packing of the weed for market, leaving nothing unsaid—no instructions untold—that a grower of the article ought to know, and so simply told, that the meanest ca-

pacities can comprehend. To this essay, the \$30 prize offered by the proprietor of the *American Farmer* was awarded, and he takes pleasure in saying that it deserves to be well studied and practiced upon, as the high character of the writer is at once a bond and guaranty that his instructions are to be relied upon.

The advice which Mr. B. gives to cultivate less tobacco is judicious, and cannot fail to commend itself to judicious minds, nor are his remarks upon the subject of the conduct of agents less opportune.

As good wine does not require bushing, we will content ourself with simply commending the essay to the notice of our readers.

COMMITTEES.—At the annual meeting of the State Society, the following resolution was adopted:

*Resolved*, That the President appoint a standing committee of five practical and scientific gentlemen, residing in the immediate vicinity of Baltimore, whose duty it shall be to examine and publish in the *American Farmer* their opinions upon all agricultural implements and machinery which may be submitted to their inspection by the manufacturers thereof.

In obedience thereto, the President has appointed the following committee:—Messrs. Ramsay McHenry, Wm. Fell Johnson, Judson M. Duckett, Robert Gilmer, and Wilson M. Cary.

The following committee has also been appointed under the resolution for a memorial to Congress, "asking them to take such measures as may seem to them best to advance the general interests of agriculture," viz: Messrs. A. B. Davis, of Maryland; C. P. Holcomb, of Delaware; Judge F. Watts, of Pennsylvania; Aaron Robertson, of New Jersey; B. Peyton, of Virginia; and J. J. McKay, of North Carolina.

The resolutions adopted on the last night of meeting of the Society, for "an address setting forth the advantages of the central position of the city of Baltimore, in which particularly the States of Pennsylvania, New Jersey, Delaware, Maryland, Virginia and North Carolina, shall be represented so far as their agriculture is concerned"—as also providing for a "correspondence with prominent agriculturists in the above States, with a view to their co-operation, and to the obtainment of members of this Society"—were also referred to the above committee.

WHEAT.—In many parts of the State, the farmers were delayed in getting in their wheat to an unusually late period—but in general, we learn that it looks remarkably well—some complaints are made of the fly, but it is not general.

The following is an extract to the Editor from Washington city, dated 14th Nov.:—

"I was through a portion of the river district of Montgomery County, on Sunday last, and noticed somewhat the state of the wheat. Owing to the drought of last summer it was found impossible to plough for early seeding, but in many places it looks very well, and does not appear to be suffering from the fly. Many of the farmers had not up to that time finished seeding, and are still busily engaged with it. From what I saw and learnt, if the next season should be favorable for wheat in that district, I have no doubt that the increase of product will be full 15 per cent. over the past year."

TO CORRESPONDENTS.—“F.” on the rotation of crops is in type, which, with a communication from Dr. Higgins, and several other original articles, and the proceedings of the P. George’s, and Talbot Societies are crowded out. “Portia’s” very acceptable and beautiful little sketch is unavoidably and reluctantly deferred until our next; we hope to hear from her often. Nothing but the necessity of publishing the many valuable papers which fill our pages for this No., most of which were promised, could induce us to evince the appearance of a want of gallantry and taste by delaying the publication of her esteemed favor. “E. F. R.” is received; also, from Jno. Glenn, Esq., an essay on “Sheep Husbandry,” from the pen of W. B. Buchanan, Esq. We expect to publish in our next the essay on the cultivation of Tobacco, from a Virginian, so highly spoken of by the judges appointed to decide on our prize essays. We are in the expectation of two valuable papers, from most eminent and practical men, one in Virginia, and the other of Delaware, on important subjects, and hope to receive them in time for our January No.

ADDRESS OF DR. THOMPSON.—Dr. James W. Thompson, of Wilmington, Delaware, delivered an address before the Chester County Horticultural Society, on the occasion of its Fourth Annual Exhibition and dedication of its new Horticultural Hall, on the 14th of September last. We have been delighted in reading this address, which for refined sentiment, beautiful diction, and classic taste, will favorably compare with any production we have read for a long time. It is alike honorable to the head and heart of its accomplished author, and must have been listened to by the audience before whom it was delivered with emotions of admiration; for its noble sentiments are alike characterized by the teachings of the moralist, the patriot, and the philosopher—teachings which enlist the sympathies of the heart and enlighten the mind.

We regretted our inability to prolong our stay at the Talbot Co. Fair to the last day, to hear the address delivered before the Societies there, by the same gentleman, but have heard it spoken of in high terms, and it will, of course, be published by the Talbot Societies.

ERRATA.—In the reports and proceedings of the State Society, published in our last, there were several errors, not however of a character requiring a special notice, except in one or two instances.—In the report of the committee on the 3d class implements, the name of Lewis W. Washington, the chairman, was printed Lewis Worthington.

In the analysis of Chappell’s Salts, by Dr. Muse, a very material error occurred. The same analysis was published correctly on page 21, of the July No. We republish it as corrected:

Bi-phosphate of Lime,	19.
— Magnesia,	6.
Muriate of Lime,	3.
Organic Matter and Water,	30.
Silica,	18.
Ammonia, in Muriatic Acid,	7.
Oxide of Iron, held in solution of Muriatic Acid,	4.
Sulphate of Soda,	12.
— Potash,	1.
	100.

LAND IN VIRGINIA FOR SALE.—We refer to Mr. Berkeley’s advertisement for the sale of land in Westmoreland Co., Va. A great improvement is going on in that county, and the situation is healthy, soil kind, neighborhood excellent, and facilities of improvement abundant.

We have read with pleasure, the address delivered by Thomas F. Bowie, Esq., before the Montgomery County Agricultural Society at its annual meeting, held at Rockville, on the 14th of September last. The chief theme discussed by Mr. B. had relation to the laws of trade: he suggested the proposition, that merchants should go to the farmers and planters to buy their productions, and that the latter should not carry them to market. This proposition he defended with great ability, and contended that this was the *natural* course of trade, and that, if such was the case, the producer would command better prices and be saved from those evils arising from having to rely upon agents, and the necessary effects incident to glutted markets, which place the producer at the mercy and cupidity of merchants, whom he contends avail themselves of every opportunity to depreciate prices, whereas, if the farmer and planter were to keep their products on their farms, the merchants would have to come and seek them, become the carriers, bear the cost of transportation, and as a consequence, increased prices would be obtained by the producers. This is the gist of Mr. Bowie’s argument, and it is but doing him justice to say, that it is ingeniously maintained. We however fear, that the day is distant, when he may expect to see his views practically carried into effect. Such a revolution in the customs of trade, is not of easy achievement.

LARGE CROPS OF CORN.—In the proceedings of the several Agricultural Societies of this State, will be found reports of some extraordinary yields of Corn, Wheat, and Vegetables. Col. Capron has sent to the Agricultural Society’s Hall, a few ears of the Oregon Corn raised by him, and which produced the largest amount to the acre, as far as we recollect, that was ever raised in this State—but it does not come up to the crop raised by Gen. Th. W. Wilson, late of Licking Co., Ohio, (but now, we are happy to say, of the Monumental city) who took the premium for the best acre, the yield being 184 bushels! The ears of Col. Capron’s corn are very large, one of them measuring 13 inches in length.

We have had deposited in our rooms, 4 stalks of corn raised by Judson M. Duckett, Esq. of Baltimore Co., on which there are 18 ears—the stalks are 12 feet high—the ears are small, but perfect, and well filled. Mr. D. is confessedly, one of the best farmers in Baltimore county, and we should be pleased to hear from him as to the product of his whole field, cultivation, &c.

Our friend of the Easton Gazette presented us with a ear of the white corn, raised by Mr. Robt. Banning, which contains 1044 grains—but the editor of the Philadelphia North American says, that a ear raised by W. Hootten, of Morristown, N. J., is before him, which “contains 1948 grains, in regular rows and of large size, and that there are four ears of the same size taken from the same stalk.” Mr. Jacob Everhart, of Westminster, Md., raised a ear of corn which contained 1535 perfect grains.

The Catoctin (Md.) Whig, speaks of a lot of large corn raised by Richard J. Lamar, near Middletown, some of the ears of which measured 15 inches in length.

SUGAR BEETS.—We have also received from Col. Capron some of his sugar beets, one of which weighs  $13\frac{1}{2}$  lbs., is 25 inches long, and 18 inches in

circumference—also a Mangel Wurzel weighing 10½ lbs.

**FINE WHEAT.**—We invite farmers and others to examine at our Hall, a sample of the white blue stem wheat raised by Col. Capron, noticed in the proceedings of the P. George's society. It is decidedly the largest and finest grain we have ever seen. We would be obliged to the Col. for a few of the stalks, if not all threshed out.

**A LARGE SWEET POTATO.**—The editor of the Worcester Shield received a present, of some sweet potatoes from Col. Cottman, among them was one weighing 5 lbs. 10 oz. Worcester county was always famous for her large sweet potatoes and pumpkins.

**YIELD OF BUCKWHEAT.**—A gentleman residing near Poplar Springs, in Howard District, has given the Gazette editor a statement in reference to the value of guano in producing buckwheat. He sowed 140 pounds of guano along with his buckwheat, on three acres of very poor land, in a high position, and reaped from it 51 bushels. He would have realized at least 55 bushels, but his turkeys destroyed several bushels.

**FINE POTATOES.**—Although the product of this season's crop of Irish potatoes has been small, we have reason to believe, that in general the quality and size are unusually fine. We have had several samples presented to us, which have been left at the Hall of the Society, and have been much admired. One of these lots was from Mr. Thos. S. Jones, of Patapsco Neck, Baltimore Co. which was accompanied with the following note:

POWELL, Patapsco Neck, 13th Nov., 1849.

Dear Sir—I send you a small sample as a specimen of my crop of late potatoes; and taking into consideration the past season, they will be hard to beat. If you think them worthy of a place in the Hall, you can put them there, or make any other disposition of them you see proper. I also send you a few small, as a sample of those I planted.

Yours, very respectfully, THOS. S. JONES.

One of the potatoes weighed 2½ lbs., and 4 of them 5 lbs. 10 oz.—they were of the White Mercers. Another potato from Mr. Carville Stansbury, of Bush River Neck, was shown us, which weighed 1 lb. 12 oz. and measured 16 inches around length ways, and 13 inches in circumference. Mr. C. has raised 800 bushels, notwithstanding the dry season, all of which we learn are remarkably fine. From Mr. Wm. M. Mask, of Cecil County, a very fine sample, blue and white Mercers,—and from Gen. B. C. Howard, of Baltimore Co., a lot of Mercers, one of which, we have had weighed and measured, with the following result:—1½ lb. in weight, 17 inches lengthways by 9 inches in circumference—the others were not so large, but were uncommonly fine; and, having given their edible qualities a fair trial, we pronounce them unsurpassed for the table. The following note from Gen. H. we annex, detailing the particulars of their culture; and we would here suggest that similar statements should accompany all specimens of vegetable productions:—

To the Editor of the American Farmer.

Sir,—I send you a few potatoes which you will please deposit in the Society's Room for a week or so, and then subject them to the severe test of being tasted, to see whether it will give you as much sat-

isfaction to eat them as it does me to look at them. They have not been selected from my patch, but brought up to the kitchen in the ordinary course of culinary operations. Please to measure or weigh them, or preserve, in some fair way, a record of their size. My object in sending them to you is to shew that I am profiting a little from the lessons taught in the "American Farmer," and (if it will not excite your jealousy, I will add) the "Cultivator." The potatoes are Mercers, planted in furrows, along the bottom of which a layer of stable manure was placed, and then the potatoes on top of the manure. The soil was a stiff clay loam. Some persons place the manure on top of the potatoes; but I have always succeeded in raising a good crop by putting the manure below. If I had known that I had such potatoes, I would have carried them to the Exhibition. But that is just what you say about a number of persons, in your account of it. I felt myself hit when I read it. But next year, I mean to come out of this class, and send everything I can rake and scrape up from the farm, which stands any chance of being looked at a second time.

BENJ. C. HOWARD.

Reslyn, near Pikesville, Md.

We hope hundreds of others, who like Gen. H. failed to be present with their vegetable productions at the late Show, will, like him, determine to make amends at the next. Our friends in little Talbot, at their late Exhibition, put us completely to shame in this department.

The Susquehanna (Pa.) Register, notices a potato raised by Daniel Searle, weighing 3 lbs. 13½ oz.—and W. J. Gibson, of Centreville, Md. has furnished the editor of the Sentinel with one weighing 3 lbs. and raised 47 bushels on the 10th of an acre.

**SHEEP IMPORTATION.**—We stated, a short time since, that Col. J. W. Ware, the eminent breeder of Berryville, Clarke Co., Va., had purchased the *five yearling ewes*, of the improved Cotswold breed, which took the first prize, for the pen of 5, of the Royal Agricultural Society of England, at the annual exhibition, held at Norwich, on the 19th July last. They were shipped on board the Francis, Capt. Ellis, for New York, and arrived in this city on the 23d ult. We had an opportunity of examining them, whilst passing through this city to the residence of Col. Ware, and have no hesitation in expressing the opinion that finer ewe sheep of their age were never seen in any country. The prize of £20 sterling was awarded them by the Royal Society; and the gentleman who has forwarded them, testifies, in due form, to their identity; in his letter, which we have been permitted to peruse, he expresses the belief, "that they are the best 5 yearling ewes in the world, averaging, when sheared, at 16 months old, the great weight of 220 lbs. each." Col. W. gave orders to his agent to purchase the *best*, without regard to price, and is perfectly satisfied that his orders have been fully carried out. A long voyage across the Atlantic, and being cooped in too confined a vehicle, of course has somewhat soiled their fleece, but they all appear to be in fine health, and, no doubt, when they have had time to recruit on the fine highlands of Clarke county, if they safely pass through the ensuing winter, they will make such a shew in the pens at our next State fair, to which their owner has promised us they shall be brought, as will astonish the natives. The public gratitude



is due to Col. Ware, for his liberality in thus securing to our country such valuable breeders; and we have no doubt that ample remuneration will be extended to him for his public spirit. Sheep husbandry is destined to be an important branch of business; and a portion of our own and neighboring States are peculiarly adapted for the purpose; and we hope to see the day when the subject will attract that attention which its importance demands.

Col. Ware recently sold, on the farm, a lot of 50 muttons, of his improved Cotswolds and crosses, to go to New York, as follows: 5 at \$35 each, \$175; 5 at \$25 each, \$125; 40 at \$10 each, \$400; making \$700 for the lot of 50, and averaging \$14 each.—Higher prices were offered for the top alone, but Col. W. refused to separate them. The 40 were of different grades of the Cotswolds, but the last of these not being so good, reduced the price of the whole lot.

#### A YOUNG FARMER—AN ACCEPTABLE PRESENT.

Master Hermann Scheller, a youthful farmer friend of ours, of Baltimore county, who has just passed his twelfth year, made us, some short time since, a present of a lot of potatoes, carrots, parsnips, oyster plants and tomatoes, all of which were the products of his own skill and toil. The potatoes are the "Bermuda," a new variety in this market, recently introduced from the Island of that name. Those sent us by our young friend, though planted late, about the last of June, were very large, much larger than the seed, showing that their translation from the hot sun of their native soil to the more temperate one where they were grown by him, had improved rather than deteriorated their growth. These potatoes have but recently been introduced in the Baltimore market, and, though our people were strangers to their virtues, they very soon became a favorite variety, and commanded the highest price. From the lateness of the period at which Master S. planted his, and from the mature growth of those raised by him, we believe them not only to be an early kind, but worthy of general culture for summer use. But, independent of this characteristic, their quality, which is superior, must commend them to favor. Our thoughtful young friend has preserved all, except those he sent us, for planting next year; and he has our best wishes for his triumphant success, as we are very certain that no one, be he old or young, is more entitled to it. So much for the Bermuda potatoes. But while we willingly bear testimony to their superior excellence, it would be churlish in us were we not to say that his carrots, parsnips, oyster plants and tomatoes were equally good—proving, by their size and quality, the care and judgment exerted in their culture, and how easy a matter it is for a youthful mind, when well directed, to succeed in the first and noblest calling of man.

In speaking of this present of our young friend, we pray leave to say that its reception inspired us with the more pleasure, as it was intended as a grateful acknowledgment of the benefit which he believes he has received from our oral and written counsels. With the zeal which animates him—with the untiring industry which he possesses—with his capacity for learning, and with his enthusiastic devotion to the occupation of a farmer, we shall be much mistaken if he does not make one of the best of our country.

#### WORK FOR THE MONTH.

Before we enter upon our hints for the work of the month, it may not be inopportune for us to state, that, so far as we can judge from the accounts in our exchange papers, and from oral statements received from individuals coming from various parts of our country, we have arrived at these conclusions: that the *Tobacco* crop has been a very short one—that the *Wheat* and *Corn* crops are much below average ones—that the *Oats* crop has been unusually short—that *Barley* is a fair average crop—*Rye* as good, if not better, than it has been for several years, and that *Potatoes*, though the yield has not been large, has been more exempt from the rot than they have been for a series of years, and that the *Hay* crop is a small one, comparatively speaking. In thus speaking, we design to be understood as including the whole country within the scope of our meaning. But taking in our range so wide an area of cultivated land, we feel incompetent, from the facts upon which our opinions have been predicated, to form any opinion as to the effects upon prices which are to be produced; for where so much land has been under cultivation, the deduction is a fair one, that crops must be much more defective than they have proved, to operate seriously upon the value of products, as notwithstanding the shortness, it is only relatively so, and hence the surpluses must be considerable beyond domestic demand. In this state of things, the effect upon prices will, to some extent, depend upon the demands from abroad for our breadstuffs and provisions. If these shall prove to be great, then we may reasonably calculate upon an appreciation of values. The anticipated shortness in the cotton crop has already created an increase in the market value of that important staple, and we have a right to look for a similar result in favor of *tobacco*, as there can be no longer a doubt entertained, that the aggregate of that crop is very far below any quantity grown for several years, and as its consumption has increased, is increasing, and will continue to increase, and as the supply will advance in value in proportion as it may be exceeded by the demand, we look forward to a very great improvement in prices, and particularly for the better qualities.

With these remarks upon crops and prices, we propose to direct your attention to some few of the labors which should be performed this month

#### ON THE FARM.

**Fattening Hogs.**—It is a fact, justified by the experience of observing farmers, that hogs always fatten most kindly when the weather is not excessively cold, as in such weather the fat producing portions of the food consumed by them go directly to the increase of the bulk of the animal, whereas, in severe weather it is diverted from that office and made to perform another, to wit, that of keeping up the heat in his body. If this view be correct, and we believe it is, it should then be an object to pen

all hogs intended for pork comparatively early in the season, and equally so is it an object that, when penned they should be well *cared* for, and regularly fed. By the term well *cared* for, we mean to convey the idea that their pens shall be calculated to keep them dry, warm, and comfortable. Besides the yard in which they may exercise, and in which they should be made to manufacture manure, they should be provided with sleeping apartments, under cover, be well supplied with straw or leaves for bedding. In the yard there should be a rubbing post. Their food should be given them at least three times a day, at stated hours, their trough should be regularly supplied with clean water, and occasionally, say once a week be given a mixture comprised of equal parts of salt and ashes.

**Fire wood.**—Detach a hand to cut down a sufficient quantity of fire wood to last not only through the winter, but sufficient to answer all the purposes of the house and quarters until this time next year. When cut, split and corded up, have it hauled into the dwelling yard and piled up for convenient use. Among the comforts of the country life, a good warm fireside is not the least tempting, and being alike conducive to health and comfort the good husbandman should see to it, so that in the stern weather of winter, every one living beneath a roof of his may be ensured against the inflictions of cold. Self-interest as well as humanity enjoins it as a duty that in fuel there should be no stint.

**Winter Ploughing.**—It is always conducive to the melioration of stiff clays to give them a winter ploughing; but this operation must be performed under favorable circumstances; the ploughing must be done when the soil is free from *wet*. If clays are ploughed when wet, when in a state of supersaturation, they will continue throughout the ensuing season in a condition little better than mortar, intractable alike to the plough, the harrow and the hoe; whereas, if the following be done when the soil is *moderately moist*, and the furrows be kept at an angle of about 45 degrees, a drainage will be carried on through all the mild weather of winter, which, aided by the effect of freezing and thawing, will so break down the texture of the clay, as to render the soil much easier worked in the spring, besides enabling the labors thereon to be performed at a much earlier period. It is but proper however here to observe, that lands naturally wet are but little benefitted by winter ploughing, draining being the corrective for such soils. As to the depth of winter ploughing on lands requiring it we should say, that we would go as deep as the plough and team would permit us.

**Milch Cows.**—Cows giving milk should, in addition to their long provender, be provided with succulent food of some kind, it matters not whether it be made of roots, chopt grain of some kind, or crushed corn cobs, made into slops. Hay and fodder, straw and corn husks do excellently well as long food, nay, they are indispensable to the preservation of the health of Milch cows, but *soft* nutritious food are absolutely necessary whenever the secretion of milk is considered as an object of moment.

Milch cows should also have warm dry stabling, good beds, be regularly watered thrice a day at stated hours, be curried and rubbed down night and morning, be provided with a gill of salt thrice in the course of each week, or the same quantity of the following mixture, which we deem better, equal parts of salt, ashes and lime. In good weather the

cows should, in the middle of the day, be permitted to take exercise in the lane; at all times they should when the weather is not inclement, have access to the yard attached to their stable or sheds.

**Young Cattle and Colts.**—These should have *sheds*, to shelter under in bad weather and of nights, they should receive moderately generous allowances of hay, fodder and straw, and be allowed a feed of grain, say half a gallon, each, of oats at night fall. They should be regularly rubbed down daily and thus become accustomed to being handled; they should be regularly watered morning, noon and night, and be salted twice or thrice a week, or given the mixture recommended for milch cows. Straw beddings or leaf beddings will also be conducive to their comfort as well as growth. Comfortable warm beds of a bleak winter's night, add much to the growth of young animals, beside economising food.

**Horses and working animals generally.**—These necessary appendages to the farm are entitled to, and should receive, the kindest treatment, their stalls should be well provided with straw bedding, they should be curried or combed, and rubbed down with straw whips thrice a day, be liberally fed and watered as often, and be given a full supply of good hay or fodder, and be salted every other day, or given the mixture we have recommended for milch cows, the which, by the by, we consider preferable to salt alone. No man ever lost anything by feeding and caring for his beasts of burthen, the better they are kept the better able are they to perform their daily tasks.

**Sheep.**—Let these be provided with sheds, plenty of straw, receive three pounds of hay or its equivalent, each, daily, keep salt in a trough to which they may have constant access, and if confined, give them boughs of pine once a week to browse upon. If pine branches are not procurable, mix a little tar with their salt occasionally.

**Harvesting Corn.**—If you have been prevented from gathering your corn, commence this work forthwith, have it husked and put away forthwith, the time has arrived when it should no longer remain in the field to tempt the aggressions of stock or excite into action the dishonest propensities of man.

**Brood Mares and In-calf Cows and Heifers.**—Each of these animals should be sheltered from the weather, and receive such portions of food thrice a day as will keep them in vigorous condition. We do not desire you to stuff them so as to bring on an unhealthy state of fatness, but we do mean that you give them a sufficiency of wholesome food to keep them and the young they are carrying in good heart. Good stables or warm tight sheds, where there are good bedding are essential to the safety of these animals.

**Fencing.**—Now is the time when you should commence preparing your fencing stuff; therefore, have as much as you may need cut down and hauled into your barn-yard, to be there fashioned into posts and rails during the wet days of winter.

**Gates.**—If the access to your fields are through bars, have gates made in their stead, economy of time, as well as appearance and utility, all conspire to commend the change to your acceptance.

**Accumulation of manure.**—Cart and wagon into your barn-yards and pig yards every thing you can rake and scrape together, which is calculated to be transformed into manure. We need scarcely repeat to you that marsh mud, the mud from the heads

of creeks and rivers, woods mould and leaves, the earth from your head-lands and fence sides and corners and from the road sides, besides various other substances, if collected and spread over your cattle yards and hog pens, will by next spring be made by your stock into good manure—into manure equally as valuable as the best stable dung. In so stating we speak from experience, and, therefore, would most earnestly conjure you by every consideration which should be dear to you as farmers, to go to work at once and avail yourself of these fruitful sources of fertilization.

**Tools and Implements**—Examine every thing of the kind on your farm, have what may need it, repaired, and be sure to keep what may not be in use, under cover.

**Draining and Ditching**—If you have any wet grounds on your farm have them relieved of the excess of water either by covered drains or open ditches, or by both; for you may rest assured, that a soil which is supersaturated with water never can produce good grain or a full crop.

**Sleighs**—Examine your sleighs, if they require it, have them repaired and newly painted up, so that when the snow comes, your wife and daughters may visit their neighbors—they deserve and should receive such attention from your hands. Let it be a matter of generous pride with you to make their sleigh the prettiest within ten miles of your home.

As Christmas will have been and gone before we next chat with you, permit us to wish you and yours "a merry Christmas" and many returns of it; that it may never come without finding your barns well filled, your cellars and larders well stored, pockets full of money, and your homes what farmers' homes ought to be, the abode of plenty, and that happiness which springs from a consciousness of having earned it by a life devoted to integrity and honor, and the practice of those virtues which illustrate the life of the Christian, and dignify man in the varied relations which he bears to human society.

### WORK IN THE GARDEN.

In the ordinary gardens of farmers there is very little done, or to be done, during this month, but still there are some things which should be attended to.

If not already done, and it ought to have been, *Cabbages* should be carefully taken up and put away for winter use. If your *Asparagus* and *Artichoke* beds have not been dressed, and the weather should prove open, you should without delay dress them. If you have frames see to the plants in them, and be sure to give them air during the middle of every good day; pick off all diseased leaves.

If you have warm borders facing the South, you may raise Cabbage and Lettuce plants, and small salading, for early spring planting, in them, by simply erecting a covering made of 4 pronged stakes, with poles laid across them, the top to be covered with cornstalks, straw and brush, the frame sufficiently elevated to admit the free circulation of sun and air. But as a frame can be very cheaply built and covered with cotton, it would be probably best to make such a structure.

Any heavy clay beds in your garden would be greatly improved by being spaded up and left in the rough to be broken down by the winter's frost. If not previously done, a few bushels of lime could very advantageously be applied to such beds. Examine and repair your garden fence—look up and

put away your tools under cover, taking care first to have them well cleaned, and such as may need it repaired.

Having attended to the things we have hinted at, then examine every bed and border of your garden, and have done whatever your judgment may suggest as being necessary.

### FARMING IN CAROLINE COUNTY, MD.

To the Editor of the American Farmer.

NEAR DENTON, October 7th, 1849.

DEAR SIR: I frequently see letters, from the several counties of our State, speaking of the improvement already made in worn-out lands, and predicting a continuation of improvement 'till the ultimatum of fertility shall be attained. Although I have seen no communication from this county (poor, neglected Caroline) of this character, I am aware that the pages of the American Farmer are as open to this as to more favored localities, and that a short account of what the farmers of Caroline are doing, in the way of improvement, will prove acceptable, the more so as their improvement may be attributed to your teaching.

For the last year or eighteen months, many of the schooners which sail from this river have brought from the cities return cargoes of lime and ashes, but not till this fall have any of the concentrated manures been brought in quantities worth speaking of. Lately, several cargoes of guano, with some bone dust and salts, have found their way up the Choptank, for fall application to the crops of wheat about to be sown. I experience a gratification, not easily expressed, on beholding these evidences, unmistakable, that a spirit of improvement, which has been perfectly wonder-working elsewhere, has been excited in the county of my adoption. One farmer has bought enough guano to cover his whole field to be sown in wheat this fall; others, having less cash or less faith, have purchased smaller quantities. These last will, no doubt, purchase larger quantities another year, and the former will borrow, if they cannot command the cash; for, having seen, they must believe. Several boats, carrying one hundred bushels, have been employed, for the last two or three years, in bringing bar oysters up the river, which are burnt for lime. It is probable that more manure has been brought to this county within the last three years than in the forty preceding years. Much of the land in this county is such as guano will act upon most favorably, being of a light loamy character, while lime and ashes will act well on that which is stiffer, and better adapted to the growth of wheat. The crops of corn on light land is nearly an average one; but where the land is at all stiff, the crop is very light.

My favorite theory for the improvement of land (and I intend to put it in practice as soon as possible) is, to apply all my manure on fallow wheat and clover, and lime on the growing clover, two years previous to putting it in corn. I prefer marl to lime, when it can be got in sufficient quantities, of a good quality, and conveniently. I think it acts more promptly, that it contains much fertilizing matter in addition to the lime, that less risk is incurred, in its application, of bestowing too large a dose, and thus injuring the land, and that corn is not near so liable to fire, during a drought, after its application, as after lime. If it be not too much trouble, tell me what you think of my plan of farming, and whether my opinion of marl is well founded.

I should like very much to learn, through your paper, how to construct a piggery on a cheap plan, with a view to making and saving the largest quantity of this most desirable kind of manure.

I am satisfied that the day is not far distant when Caroline, having been roused to her true interests, will have her agricultural clubs, and annual fairs and shows, as interesting, if not so large, as those of other counties.

J. B. STEELE, Jr.

#### ANSWERS TO THE ABOVE.

As our correspondent asks our opinion of his theory, we give it freely, though deferentially, just for what it may be worth—no more. We are among the few who do not entertain a dread of applying nutritive manures to a wheat fallow. We have seen one instance in which  $52\frac{1}{2}$  bushels of wheat per acre were grown on a lot of deep vegetable mould, which had been heavily manured with human ordure. We say we have seen this, because we measured the land, and assisted in measuring the wheat which was grown upon it. We know of another lot, of 11 acres, on which 330 double horse cart loads of slaughter-house and stable manure was spread, broadcast, on the soil, which was a tenacious gravelly clay, that yielded at the rate of 47 bushels of wheat per acre. But, notwithstanding these auspicious results, we cannot say that we would apply nutritive manures *directly* to the wheat crop, unless the kind of manure to be used was guano or bone earth; in either of which cases, we would do so. Especially would we not do so were we disposed, as is the case with our correspondent, to lime our land, as, acting under his theory, he will defer all the benefit of that mineral from his land during the growth of the wheat, and until he gets it into clover; thus depriving the first crop of its benefits altogether, and the latter until the first year after it has been set. Now, as wheat and clover both thrive admirably under the influence of lime, it appears to us that the period of application, under his plan, will be too long delayed. We think it would be better to apply the manure to the corn crop, plough it in deeply, harrow and lime just previous to planting the corn, and then to cultivate the corn with the cultivator, so as to maintain a flat surface, and not disturb the manure turned under—to follow the corn with wheat, and clover the succeeding spring. This is the plan we should pursue, with the object of improving our land in view.

With regard to *lime* operating to fire the crops, though often advanced, we never believed in. If lime is applied in proper quantities—and the character of the land should govern in respect to the quantity—there is no danger to be apprehended from that cause. Poor land should not receive more than 25 bushels to the acre; 50 bushels per acre is a full dose for light lands in good condition; whereas, clays of moderate fertility may have from 50 to 100 bushels to the acre.

We coincide most fully with our correspondent in his opinion of the superiority of marl over lime; and we would advise him to put it out, in piles of a bushel or so each, on the field he may intend to put in spring culture, the previous winter.

As to the construction of a piggery, we have to remark, that, were we about to construct one, we should make the structure with two apartments, under roof, one for feeding, and the other for sleeping; the latter a few inches elevated above the former, with strong plank floors. In the rear, we

would have an enclosed lot or yard, for the animals to come to the earth and exercise upon. In the centre of this lot or yard, we would have a rubbing post; and at all times keep it well supplied with marsh mud, woods-mould, or earth of some kind, to be worked over and fertilized by the hogs; the which we would remove, say every two or three weeks, to a place of deposit, taking care to cover it over with a few inches of earth, to keep down fermentation, and prevent the escape of the volatile gases; and as soon as we removed one body, we would supply another one, so as to keep the process of manipulation in a state of progression. Give the hogs the materials, and they will convert it into manure; they are wonderful proficient at this kind of labor; there is nothing you can throw them to eat or to work, that they cannot transform into manure.

If any of our correspondents can furnish a plan better adapted to the purpose, we would be pleased to hear from them; and their communications would be more acceptable if drawings of the piggery accompanied them.

It may not be inopportune for us to mention here, in connection with Mr. Steele's theory of giving nutritive manure directly to the wheat crop, that Mr. Whann, of Elkton, Md., cultivated a *ten acre lot, eight or ten years successively*, in wheat, and that his *average* product for the whole time was over 40 bushels to the acre, annually. He manured, nearly every year, with stable manure.

For the American Farmer.

#### AGRICULTURAL AGENTS.

MA. EDITOR: Among the various writers for your most valuable paper, I find none notice a subject which has presented itself to my mind, and seems to be of so much importance, that I am prompted to fulfil a promise made to you, by making it the substance of a communication.

In looking over the great advantages my native State has for agricultural purposes, I am forcibly struck with the fact, that there is something more required than richness of soil, suitableness of climate, proximity to market, and general diffusion of information, to elevate our agricultural condition. Something must be done to hasten the proper turn in public opinion, to suit our purposes. Our young men of fortune and education must be brought to look upon the actual occupation in agricultural duties as agreeable and commendable—to prize more highly the reputation of being skilful farmers, than that of possessing long rent rolls, and thousands of most miserably cultivated acres. I know such valuable works as the American Farmer, the various agricultural societies, the fine exhibitions, and the able addresses, delivered by our most influential citizens, all have this tendency. But still the work does not go on fast enough.

The suggestion I would therefore make, to hasten this matter, is, that many of our young men of fortune, education and family, should throw aside their pride and love of ease, and enter on the duties of what may be called an agricultural agency.

The sphere in which I suppose such a person should act, would be of a much more elevated character, than that of an ordinary overseer—that he should associate with his employer and his family, consult with him, respecting all duties to be performed, and superintend the execution of the same. This would give him ample opportunity to



acquire practical information, and afford him an agreeable and useful field in which to spend the years he would otherwise consume in idleness, waiting, perhaps, for the death of parents, to put him in possession of a farm. To draw out these tiresome years, it is customary to indulge in idleness, and its thousands of evil concomitants, or to study a profession. The latter, even under such circumstances, I believe to be of more injury than benefit to the youth, to say nothing of the great injury inflicted by such persons on society. Sometimes, they go behind the counters of ignorant and narrow minded merchants, to measure and sell tape—a fit school to destroy all energy of character, and what little taste there may be for rural pursuits. Let only a few young men act as pioneers in this field, and it will soon be looked upon as a commendable occupation for farmers' sons, *even if they be of gentle blood*. Many old and gouty gentlemen could be found who stand in need of such an officer, or could be persuaded they do, after they have seen some of their more credulous neighbors try them. Many widows, of large estates, would be just suited by such agents, who now have to trust their business in the hands of overseers, who, in most cases, feel but little interest in their employers' welfare.

The particular duties of such persons must, in a great degree, depend on the wants of their employers; and so, no doubt, many young men would find their situations disagreeable; others, however, will meet with pleasant ones, where they will have full opportunity to obtain practical knowledge of agriculture, horticulture, the rearing and training domestic animals; also of business transactions generally, and the thousands of little domestic matters, which we know, from experience, are invaluable to those beginning the world for themselves. During these years of probation and apprenticeship, by judicious economy, something may be saved from each year's salary or commissions, which would be found very serviceable in commencing farming, and, together with the old employer's fair daughter's hand, perhaps, would give a fair start in life.

I feel deeply convinced that the suggestion here made is a good one, and am forced to make it, because I see around me, daily, young men who are idle, or engaged in frivolous pursuits, at the sacrifice of character, energy and health, who, I know, would gladly engage in any occupation suited to their habits, and not below their dignity. They are kept in this situation by the erroneous notions of their fathers, who keep them around them, to inherit the patrimonial estate, which, in most cases, is so impoverished as to cause the proprietor to practice the strictest economy, and deny himself every comfort, instead of sending them off, like the boys of Yankee land; by which means, they would, in all probability, acquire a larger fortune than the paternal acres are worth, or apportioning them off a small farm, and setting them to work, to pay for it.

It does seem that some such parents, instead of using their property to the best advantage, by encouraging their children to settle around them, and improve their property, are keeping them in as dependent condition as possible, that there may be a grand day of rejoicing and independence, when their wills are read.

If parents wish their sons to be men, and act with dignity becoming men, they should strive to give them that independent position, without which,

they can never be truly men. It is unbecoming the dignity of a man to be dependent or unemployed.

To this most impolitic course, pursued by our large land proprietors, I think Mr. John S. Skinner might trace a great deal of the depopulation of the Eastern Shore of Maryland.

And now, Mr. Editor, how many young men will tell me, through your journal, by this time next year, that they have adopted my suggestion? I trust many.

Yours, truly,

SPZ.

Talbot county, Md.

#### VISIT TO BETHANY, BROOKE CO., VA.

To the Editor of the American Farmer.

DEAR SIR: I wrote, some time ago, to Mr. Buchanan, near Wheeling, Va., for an essay on the management of sheep, which I hope soon to place in your possession; and, in the mean time, I send you an extract from one of his letters, giving a vivid and beautiful description of a portion of country in his neighborhood, and, what is of vastly more importance, of those who occupy it. J. G.

“But I wish you had been with me in a short, but delightful jaunt I have lately made through some of the most interesting portions of Brooke and Ohio counties; to which, a noble turnpike road, and fine dwellings and improvements, have been added, during my absence from this neighborhood. There cannot be a more beautiful and fertile country in the world; and, though undulating and almost precipitous, the eye looks from one swelling eminence to another, in endless succession, without encountering a waste or barren spot, or a field that is not covered with grain, or luxuriant in pastures, on which large flocks of sheep or herds of cattle are feeding, or reposing, in plenty and peace. Lofly forests occasionally intervene, but these only add variety to the prospect, and are either rapidly disappearing beneath the axe, to make room for further cultivation, or they are trimmed out, to admit the sun to the soil, which, with this advantage, produces, spontaneously, a rich growth of grass—affording food and range to stock, sheltered by stately trees, and interspersing the country with parks an English nobleman would covet. The soil, naturally fertile, rests on a substratum of friable limestone, or rather indurated marl, lying within reach of the plough, which brings it to the surface, where it disintegrates, on exposure to the atmosphere, and, mixing with the earth, keeps up a constant process of fertilization, while the land is in cultivation; or, if permitted to repose, it is covered, in a short time, with the richest herbage, generally green grass (*poa viridis*), always an indication of its being in the best possible condition. Here, there is no regular system of rotation of crops, with a view to amelioration or improvement; nor does there appear to be much need of it. Corn is grown until the yield falls short of fifty bushels to the acre; then come oats and wheat; and when these show symptoms of decline, not so much from exhaustion of the soil as of the principle in it favorable to their production—in the language of the country, “tired of such crops”—the land is laid down to grass, to be mowed or pastured, or both, that its recuperative powers, in a state of rest, if this may be so called, restores all its properties, and refits it for cultivation. Manure will accumulate about barns and stables, and is hauled out, but seldom ploughed in—a slight top dressing being generally resorted to, to expedite a process nature

would herself soon accomplish, without requiring, as in your tramontane regions, the land to be surrendered to her for the purpose, and for the time being, to the entire exclusion of the scythe and the hoof; or to keep up the reputation of good farmers, among men who take pride in their estates, while they derive profit from them, and who are neither neglectful of the bounties of Providence, nor selfish in their enjoyment. Long possessed of the comforts and essentials of life, they are now surrounded by many of its luxuries and elegancies; and while they conduct you over their farms, and point, with laudable exultation, to the beauties and advantages of the country they occupy, they take you, warmly, by the hand, on the portico of an elegant dwelling, and introduce you to apartments furnished in accordance with the taste and fashion of the day, with the same cordiality that distinguished their hospitality in those primitive and by gone times, when the latch string hung from the door of the hewn log house, the old fashioned sign of cheerful and hearty welcome. In a word, when you visit me, some of these days, as will, I hope, soon come to pass, we will make an excursion together through these favored districts; and if you do not recall an opinion you once expressed to me, of the West in general, I have formed an improper estimate of your enthusiasm in matters relating to agriculture and good fellowship. Nay, more: I will promise you an intellectual treat, into the bargain; for we will extend our trip to Bethany, where you will be compelled to acknowledge I may always meet with friends to rub the rust from my mind, when it has accumulated among the sober and matter of fact pursuits of home. We will find there a patriarch—in his modes of life—in his social and moral dominion over the habits and dispositions of his family and dependents—in the discharge of the duties of religion, benevolence and hospitality—in the care and control of his flocks, his herds, and his vast estates; but we must also go prepared to encounter in him the sage, the scholar, and the man of the world. We must brush up our acquaintance with books, with manners and with men, and be ready to soar into metaphysics—to discuss the practical and useful—to speculate on arts and sciences—nay, even to trifle agreeably, or we will not be companionable to President Campbell, at home.

Then, too, there will be Professor Pendleton, with whom we will have our noctes ambrosianæ; but we must brighten up our attainments in poetry, belles lettres, and the classics, to beguile him into literary gossip, and lure him, 'nothing loth,' from science and sober philosophy, rather, I think, the employment of his talents than the pursuit of his taste; and yet we shall find him at home on his farm, familiar with all its details, and combining knowledge with industry, in its direction and management. We will look, from his balcony, upon the lovely valley, or, more properly, basin, beneath and around us, of considerable extent; when we reflect that it is the property of one individual, and but a portion of his possessions—surrounded by lofty hills, crowned with noble forests, rich, during my recent visit, in the variegated foliage of autumn, and be, for awhile, forgetful of the tumultuous world from which they appear to exclude us. In short, for I am afraid you are growing tired, we will imagine, as we contemplate the quiet hamlet, springing into existence at our feet, the tasteful dwellings, and well dressed shrubberies of the professor's, dotting the prominent points of the land-

scape, or listen to the tinklings of folds, blending harmoniously with other sounds and sights that give interest and embellishment to rural life, that we have found the happy valley of Rasselas, with this advantage in our favor, that, instead of the wayward and capricious prince, and the insipid princess, for our companions, we shall have the society of men of the highest order of intelligence and cultivation, and of ladies worthy to be their partners in moral, social and intellectual enjoyments."

October, 1849.

## THE SECOND ANNUAL EXHIBITION

OF THE

### CHARLES CO. AGRICULTURAL SOCIETY,

Took place at Port Tobacco on the 30th and 31st Oct., and we are highly gratified at the complete success which has attended the labors of our public spirited friends of Charles. The "Times" of that place gives a full account of every thing of interest that occurred during the fair, and it is with reluctance we are compelled to make so brief an abstract of the proceedings, as therein detailed. The meeting was one of the largest ever held in Port Tobacco, notwithstanding the inclement weather, which no doubt prevented many others from attending. The Ladies honored the Society with their presence in great numbers. The editor of the Times says that in all the varieties of stock, implements, culinary articles, fruits, tobacco and grain or other productions of the garden or field, there were none inferior, and very many greatly superior to those exhibited at the first show, and the additional arrangements which had been made for the accommodation of stock, implements, &c., will be required to be still further increased for the next exhibition.

Says the Times—"In the grounds allotted to the stock, the works of the machinists and farming implements in general, the exhibition of which was numerous and of excellent quality, the farmer had an opportunity of selecting, without the trouble and expense of going abroad, the best specimens of wheat thrashers, corn shellers and crushers, straw and fodder cutters, horse mills and hand mills, ploughs, harrows, &c., brought from Baltimore by those enterprising mechanics, Murray & Clark, Drury and Whitman; and it is gratifying to hear that some of these admirable labor-saving machines, ploughs, &c., were disposed of to the knowing ones, who preferred their own personal inspection to relying upon agency, too much depended upon by farmers to their cost."

The display of the products of the garden and the field, was extraordinarily fine—and as regards fruits, says the Times, "the apples, lemons and grapes were of superior quality, exhibited by ladies and of their own raising. If the Napoleon of fruits [Dr. Bayne, of P. George's], lately elected the President of the Agricultural Society of a sister county, does not keep a good look out, he will find, the coming year, his green house and garden plundered, not of their fruits, but of the premiums, by our fruitful dames. He had best be cautious how he distributes his seed and scions to mar his own domicile, for they may rise up in judgment against him. "*Verbum sat.*"

The following facts, from the Times, will, probably, astonish many of our farmers, as to the productive powers of the soil of Charles, and the improvement which has been going on in that section of our State:

"Few believed that thirty-six bushels of wheat or twenty barrels of corn per acre could have been produced, yet the premiums awarded to Mr. John B. Maddox and Mr. Richard Barnes, for wheat, and to Mr. Samuel Cox, for corn, prove what may be done by industry and good management. It is to be regretted that other farmers were not moved by a similar spirit. Two or three cases of which we have heard, and of which there is no doubt, had they been reported, would have gratified the Society and given additional encouragement to their brother farmers. On one acre of land, or seventy yards square, more than fifty-three bushels of wheat were grown, cut and thrashed on the farm of Dr. John Fergusson. A field of corn of Mr. John Hamilton, it is believed by several who had inspected it, would have yielded fifteen to eighteen barrels of corn to the acre of at least twenty acres. Upon the farm of Mr. Walter Mitchell, upwards of twenty-two barrels were taken from one acre. It is believed that Mr. William B. Stone could have shown an equal result, and several other farmers in the vicinity, had their zeal been as abundant as their lands. Many have expressed disappointment that the most excellent and energetic President of the Society should not have gratified its members by a report of the product of a lot of twenty-five acres of wheat, so beautifully cut, during the late harvest, by his admirable wheat cutter, with his experience also of the value of the machine. But these cases of omission, it is hoped, will not occur again, and that future Exhibitions of the Society will receive the aid of all its well wishers."

The following is the report of the judges on corn, oat and wheat crops, Messrs. Francis Thompson, Anthony B. Simmes and Jas. T. Neale:

"The Committee respectfully report, that they award the first premium of \$5 to Mr. John B. Maddox for the best acre of wheat, yield 36½ bushels; the second premium on Wheat to Mr. Richard Barnes, yield 26 6-49 bushels; to Mr. Samuel Cox, the first premium of \$5 for the best acre of Corn, yield 19 barrels, 3¼ bushels; second premium of \$3 to Mr. Washington A. Posey for the second best acre of Corn, yield 15 barrels, 8¼ bushels. For the Oat premium, no exhibition."

The judges of the first class of Agricultural Implements, in deciding upon the large lots exhibited by Messrs. Murray & Clark, Chas. H. Drury, and E. Whitman, Jr., all of Baltimore, "with great pleasure express their high appreciation of the mechanical skill, faithfulness of workmanship, and enterprize displayed by each of these gentlemen, and it would be highly gratifying to the committee, if the funds of the Society were such as to enable them, to award premiums to each, each having some implements of rare excellence, and all eliciting the just admiration of the committee. But as this cannot be, nor can the committee, for want of time, specify each implement, we, expressing a distrust of our judgment and the hope that each of these gentlemen may be encouraged in their laudable pursuit, and that the public will award to each the full share of patronage which their merits so largely deserve, award the premium to Charles H. Drury."

The committee of the second class of implements, to whom were assigned the duty to report upon ploughs, "regret that the late inclement weather had rendered the ground unfit to give a fair trial of the different Ploughs presented for their inspection. But so far as they have been able to judge of their

different merits, they have come to the conclusion to award the first premium to Mr. Rich'd B. Posey, of Charles county, for his No. 9 improved Beach Plough, and they award the second premium to Mr. Charles H. Drury, of Baltimore, for his three-horse improved Beach Plough. The plough for which the first premium is awarded, was made by Mr. Drury, under the instruction of Mr. Posey, who suggested the improvement."

The display of domestic manufactures was very large, as may be seen by the following abstract from the report of the committee appointed to receive and arrange the articles presented for exhibition:

Twenty Counterpanes, twenty-three Quilts, one piece cotton Fringe, six pieces Cotton Goods, ten pieces home-made Twilled Cloth, three pieces home-made Cloth for women's wear, one piece home-made Kersey, six pieces home-made striped Cloth, six pieces Flannel, seventy-one pairs Socks and Stockings, of cotton and wool, three pieces Domestic Cloth, two specimens of crayon Drawing by Miss Jane Turner, one worked Table Cover, one lot of beautiful Tapestry-work by Miss Camilla Lancaster, two pieces Worsted-work by Miss Ann M. and Amelia Thompson, Tea-board Cover, &c., a beautiful sample of Netting-work by Miss Marianna Alexander, a young lady of twelve years of age, five lots of home-made Soap, two lots of Lemons and Grapes, twelve lots of Butter, seven lots of Corn and Wheat Bread.

The address of Wm. Matthews, Esq., the orator of the day, is represented as truly eloquent, and a copy, at the request of the Society, has been furnished for publication.

The Times, in closing its report of the exhibition, thus sums up the benefits likely to result from this spirited exhibition:

"Upon the whole, the members have cause to be proud of the success thus far attained; and if they may anticipate for the future by the past, they will be amply repaid for their enterprise. The whole farming interest will be improved, the community at large benefitted, the rising generation encouraged by good example, and single blessedness expunged, whilst domestic industry will be promoted."

The following is the list of premiums awarded by the several committees:

To Francis H. Digges, for the best Stallion (Beelzebub), \$5; James F. Earle, for best Brood Mare, \$5; J. Young, for best thorough bred Colt, 1 to 3 years, \$3; Dr. R. Fergusson, for best thorough bred Filly, 1 to 3 years, \$3, Samuel Hanson, for the best common Colt, 1 to 3 years, \$2; Charles A. Pye, for the best common Filly, 1 to 3 years, \$2; Francis H. Digges, for the best pair of Draft Horses, \$6; John G. Chapman, for best Saddle Horse, \$5; Wm. B. Matthews, for best pair of Mules, \$5; George P. Jenkins, for second best pair of Mules, \$3, S. Cox, for best Jack (Knight of Malta, 3 years old), \$5.

Leonard Marbury, for Durham Bull Washington, \$5; Jas. F. Neale, for best Bull of common stock, \$3; J. Hamilton, for best Milch Cow of improved breed, \$5; G. W. Matthews, for the best Milch Cow of common stock, \$3; F. Thompson, for best Heifer of improved breed, 2 to 3 years, \$3; R. B. Posey, for best Heifer of common stock, \$2; John Hamilton, for best yoke of Oxen, \$5.

Francis Thompson, and Francis C. Green, for best Buck of improved breed, \$3; S. Cox, for best pair of Ewes of improved breed, \$3; G. W. Mat-

thews, for best Buck of common breed, \$2; G. W. Matthews, for best lot of Lambs, \$2, Dr. Thos. A. Davis, for best slaughtered Mutton, \$3.

Leonard Farrall, for best Boar, \$3; Roderick G. Watson, for best Sow, \$3; G. P. Jenkins, for best Sow and litter of Pigs, \$3; G. W. Matthews, for the best Pork Hog of the season, \$2.

Wm. Thompson, for best hoghead of Tobacco, not less than 600 lbs., \$5; Wm. Thompson, for the second best do., \$3; John B. Maddox, for best acre of Wheat, \$5; Richard Barnes, for second best acre of Wheat, \$3; Samuel Cox, for best acre of Corn, \$5; Washington A. Posey, for 2d best acre of Corn, \$3; Dr. T. A. Davis, for best  $\frac{1}{2}$  acre of Irish Potatoes, \$3; W. A. Posey, for 2d best  $\frac{1}{2}$  acre of Irish Potatoes, \$1; L. Farrall, for best  $\frac{1}{2}$  acre of Turnips, \$3; R. B. Posey, for best bushel of Irish Potatoes, \$1; Dr. T. A. Davis, for best bushel of Sweet Potatoes, \$1; John Ware, for best bushel of Turnips, \$1; Mrs. John Hamilton, for best lot of Cabbage, \$1; Miss Mary J. Wills, for best lot of Carrots, \$1; Miss Mary J. Wills, for best lot of Parsnips, \$1; Francis Thompson, for best lot of Beets, \$1; E. W. Day, for best lot of Pumpkins, \$1.

Mrs. H. Lancaster, for best lot of Fruit generally, \$3; Wm. G. Robey, for best sample of Apples, \$1.

Mrs. G. W. Matthews, for best domestic Flannel, \$2; Mrs. J. F. Neale, for best twilled Cloth, not less than 5 yards, \$2; Mrs. S. A. Gardiner, for best striped Linsey, \$2; Letitia Oliver, for best striped Cotton, \$2; Mrs. S. A. Gardiner, for 2d best domestic Flannel, \$1; Mrs. C. Ann Allbrittain, for 2d best twilled Cloth, not less than 5 yards, \$1; Mrs. E. A. Middleton, for 2d best striped Linsey, \$1; Mrs. S. A. Gardiner, for 2d best Cotton Cloth, \$1; Mrs. J. G. Chapman, for best home-made Quilt, \$2; Mrs. Mary A. Gardiner, for 2d best do., \$1; Mrs. C. Turner, for best home-made Yarn Counterpane, \$2; Mrs. Eleanor Hunt, for the 2d best do., \$1; Mrs. Sophia A. Gardiner, for the best lot of home-made Yarn Stockings, \$1; Mrs. Jas. F. Neale, for best lot home-made Yarn Socks, \$1; Mrs. V. W. Smoot, for best home-made Soap, \$2; Mrs. Dr. Miles, for best home-made Wheat Bread, \$2; Mrs. John Hamilton, for best home-made Corn Bread, \$2; Mrs. E. G. Davis, for best 2 lbs. of fresh Butter, \$2; Mrs. Mary E. Neale, for 2d best 2 lbs. fresh Butter, \$1; Mrs. John Hamilton, for best potted Butter, \$2.

Henry A. Moore, for best pair of Turkeys, \$1; J. L. Brawner, for best pair of Muscovy Ducks, 50c.; John B. Maddox, for best pair of Puddle Ducks, 50c.; James F. Neale, for best pair of Geese, \$1; J. Hancock, for best pair of Dunghill Fowls, 50c.

C. H. Drury, for best lot of Agricultural Implements, \$15; Richard B. Posey, for best two-horse Plough, \$3; C. H. Drury, for best three-horse Fallowing Plough, \$3.

#### PRINCE GEORGE'S AGRICULTURAL EXHIBITION.

We had prepared and have in type an extended notice of the awards made at the late Exhibition at Upper Marlboro; but have been compelled to defer the same to our next—We however publish the following report of the committee on Agricultural Productions:

The committee on agricultural productions beg leave to report, that in accordance with the duty assigned them they carefully examined the various articles offered for competition, and do award as follows:

To Horace Capron, the premium for the best acre of wheat, yielding 39 bushels and 36 lbs., as per certificate.

To Horace Capron, for the best seventy yards of corn, measuring 117 7-8 bushels, as per certificate.

To Horace Capron, premium for best eighth of an acre of sugar beets, yield 65 bushels.

To Dr. John H. Bayne, the premium for the best lot of vegetables for table use.

To Walter W. W. Bowie, premium for the second best lot.

To John Brookes, premium for the third best lot.

The committee were gratified at the large exhibition of vegetables; and were puzzled to decide between the competitors for the first and second premiums. Mr. Bowie exhibited a greater variety than Dr. Bayne, having forty-six kinds on his table; but the committee were unanimous in awarding to Dr. Bayne the premium for superiority. In a lot of more than twenty kinds, there was not to be discovered a single vegetable of inferior quality. Those offered by Captain Brookes were of great excellence, and the committee are glad to award him a premium. Mr. Wm. A. Gunton, of Spalding's district, exhibited a small parcel of vegetables of great superiority of their kind. The committee were particularly pleased with his celery, and respectfully suggest that the Society award him a premium of \$1 for this excellent esculent.

The committee cannot speak too highly of the several parcels of Irish potatoes shown them. The "Bowie Seedlings" were large and fine; and the Mercers very superior. The committee award the premiums to Robert C. Brooke for the best eighth of an acre of Irish potatoes, the yield being 39 bushels and half a peck; and to Oden Bowie the premium for the best half bushel of potatoes.

Mr. George W. Hilleary and Mr. George Morton exhibited sweet potatoes of fine varieties and extra size. To the former the committee recommend a premium of \$1.

The committee hope it will not be considered a digression if they here introduce the name of a late member, whose contributions to the vegetable and other departments of the Society have been so often the theme of commendation. THOMAS DUCKETT, Esq., was an active and intelligent member, whose example incited others to zeal in the cause of Agriculture; his memory will long be cherished by the members of the Prince George's Agricultural Society, and the many excellent traits of his character treasured in their fondest recollection.

The servant of the late Mr. DUCKETT, brought to the committee several parcels of celery from the garden at "Willow Brook," which was admired for its size and excellence—some of the stalks being 4½ feet in height.

For particulars in reference to the wheat, corn, hay potatoes, &c. offered for competition, the committee refer the Society to the accompanying certificates. The yield of timothy hay spoken of by Col. Capron, was extraordinary—being 2 tons 1550 pounds per acre.

GEORGE W. WILSON,  
WILLIAM D. CLAGETT,  
SAMUEL L. BROOKE.

#### TALBOT COUNTY EXHIBITION.

In like manner we must defer the notice of this Exhibition, also in type, giving only at present the following report of the committee on Agricultural productions:



The Committee have awarded to Jas. N. Goldsborough, the first premium for the best 5 contiguous acres of wheat, grown on fallow,  $37\frac{1}{2}$  bushels per acre, of \$10. To James N. Goldsborough, the first premium for the best acre of wheat, grown on fallow,  $37\frac{1}{2}$  bushels per acre, of \$5. To Martin Goldsborough, for the best acre of wheat grown after corn, 24 bushels per acre, the premium of \$5. To David Kerr, for the best acre of Indian corn, 70 bushels per acre, the premium of \$5. Mr. Kerr

would have received the premium for the best five acres of corn, but his certificates were not in order. To Martin Goldsborough, the premium for the best five contiguous acres of Indian corn, 50 per acre, \$1. To James N. Goldsborough, for the best  $\frac{1}{4}$  acre of Ruta Baga, 168 bushels, the premium of \$4. To William R. Hughlett, for the best  $\frac{1}{2}$  acre of Irish potatoes, 95 bushels, the premium of \$4. To Martin Goldsborough, for the next best  $\frac{1}{4}$  acre of Irish potatoes, 75 bushels, the premium of \$2.

### COMPOST FROM SWAMP MUD, &c.

To the Editor of the American Farmer.

There is no operation more important to the farmer, than the improvement of his land, and the bringing it to that state, in which it can produce remunerating crops at the smallest possible outlay.—All will allow this to be a desideratum to the farmer. As I have devoted considerable study and time to the subject, I offer the results to the farm-

ing community, hoping they may be benefitted thereby. But every farmer should have each "shift" upon his land carefully analyzed and see what his land needs to enable it to produce the particular crops he may cultivate. It is useless for him to hope to improve his land by any one thing: "Man cannot live by bread alone," neither can land yield "its abundance" upon one fertilizer alone. The following table will show the "inorganic matters" necessary to each crop.

	Potash, 100 parts abh.	Soda, 100 parts abh.	Lime, 100 parts abh.	Magnesia, 100 parts abh.	Phosphoric Acid	Sulphuric Acid	Silica	Iron	Alumina	Chloride of Sodium	Chloride Potassium	Total	Ashes, 1000 lbs.
Wheat . . . . .	25.90	0.44	1.92	6.27	60.39		3.27	1.33	0.51			100	11.77
Wheat Straw	0.569	0.830	5.829	0.94	4.837	1.022	75.66		2.56	7.53		100	35.18
Corn . . . . .	30	.08	1.3	17.	50.1	0.3782	0.9734			0.1684		100	
Corn Straw .	14.46	39.92	5.35	1.84	11.76	0.59	18.89	0.90		6.29		100	
Tobacco. . .	19.55	0.27	48.68	11.07	3.66	3.29		2.99		3.54		100	
Buckwheat. .	8.74	20.10	10.38	6.66	50.07	2.16	0.69	1.05				100	
Clover. . . .	16.10	40.71	21.91	8.28	4.12	1.06	2.60	0.46		4.73		100	74.78
Peas . . . . .	35.20	10.32	2.70	6.91	34.01	4.28	0.29	1.94		2.56		100	24.64
Turnips . . .	39.444	16.629	11.93	4.03	5.82	12.70	6.16	0.52	0.57		3.02	100	63.03

In addition to these there must be nitrates, ammonia, humus and humic acid. Now to improve the land all these must be added (if deficient) and a sufficiency to supply loss by sinking in the subsoil, evaporation, and washing out by rains. In what way can all these be returned at a reasonable outlay? It is well known that "Swamp Mud, &c." contain all, or nearly all these ingredients, derived from the washings of the upper soil, and the accumulation of decayed vegetable matter. This in its natural state is not adapted for the immediate uses of plants. It requires a preparation to decompose it and develop its latent (if I may use the expression) nitrates, and to convert its insoluble humus, into soluble. This can be effected by alkalies, lime and farm yard manure. For a compost for corn, which forms the basis of all the other composts—the following is the formula:

#### CORN COMPOST.

60 parts Swamp Mud,

4 " Ashes,

20 " Manure,

16 " Marl or 5 to 8 of Lime.

Apply one quart to the hill.

The mud should be dug and exposed 10 days to

the action of the sun, to evaporate the water—covering it at night from dews. After drying the ingredients should be well incorporated with it: 1st layer of mud, then manure, then mud, then ashes, then mud, then marl, then mud, covering the whole with mud. It should be stirred daily; the fermentation, decomposition of the mass, and development of the nitrates will be facilitated by watering with liquid manure, or solution of potash, (lye.)—The compost should be prepared under a shelter, to prevent the access of rain, but not the air or sun.—In from 10 to 30 days, the whole will be thoroughly fermented and decomposed, and its entire character changed. The addition of *dead animal matter* will greatly aid the development of ammonia and the nitrates—but it also absorbs large quantities from the atmosphere—the decomposing and fermenting mass offering greater attraction to it than the atmosphere. The nitrogen as it is produced, unites with the oxygen and forms ammonia, which is absorbed and retained by the mass, and the water it contains—which absorbs 670 its own bulk—with the lime forming nitrate of lime, with potash forming nitrate of potash, with soda forming nitrate of soda, &c. &c. Numerous other important chemi-

cal changes also take place, to which we have not time to refer. The mass will contain near the following ingredients :

Guano—(humus and humic acid)	1580 lbs.
Lime, Nitrate, Phosphates, Sulp. Carb.	2150 "
Magnesia, " " " "	250 "
Potash, " &c.	40 "
Soda, " &c.	35 "
Alumina,	150 "
Phosph. Acid,	30 "
Sulp. "	25 "
Chlorine, variable quantity,	
Silicates,	25 "
Siliceous matters, water, &c. about	3000 "

7285

100 bushels of the mass weigh 7500 lbs. These are the average, but they vary according to the mud, ashes and marl.

## COMPOST FOR TOBACCO.

- 60 parts Corn compost,
- 1 " Guano,
- 2 " Sulph. Lime.

Mix well. The plaster converts the ammonia of the Guano into a sulphate and fixes it. One quart in the hill.

## COMPOST FOR SWEET POTATOES.

- 95 parts Corn Compost,
- 3 " Bone Dust,
- 2 " Ashes,

Mix. Apply 300 bushels to the acre.

The Sweet Potatoe contains among its inorganic constituents about 60 per cent. potash, and 25 p. c. of phosphate lime.

## WHEAT.

- 86 parts of Corn Compost,
- 60 " Red Clay,
- 2 " Salt,
- $\frac{1}{2}$  " Bone Dust,
- $\frac{1}{2}$  " Sulph. Lime.

Mix well—apply 300 bushels to the acre.

These composts can be prepared at an outlay not exceeding  $1\frac{1}{2}$  cents per bushel, and be found equal to guano for present, and vastly superior for permanent improvement. H. M. P.

P. George, Va.

## THE FLOWER GARDEN—DECEMBER.

[Prepared by John Feast, Florist, 279 Lexington st. for the American Farmer.

The greenhouse and hothouse are the only attractions in the floral department this time of the year, and require care and attention to have every thing look clean and in order, which is essential to the health of all plants. In the hothouse, fire will be required every night, to keep up a moderate heat, but not more than will keep the tender plants from being retarded in their bloom, as it is injurious to plants to keep up a high temperature this time of the year, at the approach of winter, as they thereby become weak and sickly before spring. It is generally the case that too much heat is kept up at night, when it is not necessary, thereby never allowing that repose that all plants require; and as a proof that nature should be our guide, observe that those kept through the winter without fire heat, if properly attended to, always flower and look the best in the spring.

In the greenhouse, the *camellias* will begin to bloom, and should be carefully watered and syringed over the tops occasionally; and it will be necessary to keep a little fire at night, if the weather is cold;

but give plenty of air through the day, if fine. Many plants put in the houses are infested with the red spider, especially after such a dry season as we have had, and, if not destroyed, will soon infect the whole plants in the house, and cause a sickly appearance. The best method to destroy them, if you have your fire on, and the flues tolerably hot, is to put water thereon, sufficient to fill the house with steam, which, repeated a few times, will soon make them leave the plants, if not destroy them, as they cannot withstand moisture. There are many modes of destroying them with sulphur, &c., but this is the most simple and efficacious of any that have been tried as yet, and attended with less harm.

*Pelargoniums* should be kept in a cold part of the house, and kept clean from the green fly, as well as all other plants, and repotted, if necessary. Double flowering *violets*, for blooming, should be set as near the glass as convenient; they will flower better; and they should also be put in larger pots, if required. *Cactus truncatus* will be coming finely in bloom, and should be neatly tied up, so as to show the flowers fully. All *cape bulbs* may be planted, if not done before, in pots suitable for flowering.—*Pansies* in the open ground might be put in pots or frames, for flowering through the winter, as well as any other showy plants deserving taking care of. But, presuming most all out-door planting is finished by this time, nothing of importance can be done in the garden till spring, if every thing is pruned and carefully protected. Planting *box edging* and *walks* intended to be gravelled may be done so long as the weather continues fine.

For the American Farmer.

## AUTUMN.

He has again visited us—the same sober and unchanged Autumn; he who wraps the fields in his hoary mantle, and dresses the meadows in his morning gown of grey. Again he has commenced his work amongst the forest leaves, and changed the deep green robe of summer, in which they were clad, for one of crimson and russet; the faded and shrunk leaves drop off, one by one, and, borne along by the cold north-western winds, they rustle past us, with a sad foreboding story: they tell us of nature's faded loveliness. The husbandman is now busied in gathering his fields of golden corn, which bends its graceful head under Autumn's frost; while the orchard yields to him the ripe and mellow fruit. The gentle breeze shakes the brown nuts from the stately forest trees, and the shouts of joyful children are heard, collecting them. The harvester's song is hushed, and the ploughman's whistle is no longer heard; but the thresher's flail is now sounding in the well filled barn, and the sound of the woodman's axe re-echoes amongst the woods and hills. The report of the sportsman's rifle sounds through the valley, and, bleeding, the swift-footed deer and the growling bear sink under the sure and unerring aim, and, struggling, yield up their lives. The blast of the hunter's horn is heard on the hills, intermingled with the cry of hounds, in hot pursuit of the fox. Flocks of swans wing their way over us, retreating from the rigid clime of the Northern lakes to the more genial savannahs of the South; the swallow has long since left us; and nearly all the feathered tribe are preparing to depart, in search of a more salubrious clime. The flowers of summer are faded, and the fragrance of the blossoms no longer exhibi-

rate or invigorate us. Nature puts on a melancholy aspect, and will soon be shrouded in a sheet of snow and ice. The moralist is instructed to prepare himself to spend the coming drear and chilly winter in the most comfortable and advantageous manner; while, to the Christian, all conveys the thought that he must sow the seeds of righteousness before the winter of death overtakes him, that he may be prepared to reap a harvest of eternal happiness.

Hanover, Pa. Oct. 20, 1849. J. S. G.

**A NEW MACHINE.**—A model of a machine called *The Bran Duster*, was exhibited at the Fairs held in this city in October, of which we had the opportunity of witnessing the operation, and which we deem worthy the attention of millers. This machine will, in every 100 barrels of flour, make 4 barrels more which escapes with the bran, by the usual modes of grinding. The saving is thus easily calculated, and will be found an item of no inconsiderable amount. The machines sell for \$300 to \$400, and no doubt will soon be adopted by every miller. We understand that they are about being placed in some of the mills near this city. It can be seen in operation at the Turning establishment of Mr. Stowe, in Uhler's Alley.

#### METEOROLOGICAL TABLE,

From the 21st of October to the 20th of November.

Kept at Schellman Hall, near Sykesville, Carroll County, Md

Taken at 6 o'clock, a. m., 2 o'clock, noon, and at 6 o'clock.					
Wind.	Temperature			Remarks.	
21st	NE	NE	50 49 49	Rain 1 inch	
22nd	E	W	52 59 59	Fog, clear	
23rd	W	W	48 68 63	Clear	
24th	W	NW	59 57 53	Clear	
25th	W	W	38 61 50	Clear	
26th	W	S	43 67 66	Clear	
27th	SW	SW	43 74 67	Clear	
28th	S	S	45 72 67	Clear	
29th	S	NW	63 63 55	Rain 2 inches.	
30th	NW	NW	46 53 48	Clear	
31st	N	NW	38 43 40	Clear, snow	
1st	N	NW	31 43 40	Clear, cloudy, thund., elec., hail	
2nd	SW	SE	32 51 45	Frost, clear	
3rd	S	S	36 69 85	Clear	
4th	S	S	47 73 65	Clear	
5th	SW	S	47 73 67	Clear	
6th	S	S	51 78 68	Clear	
7th	S	SE	51 78 60	Fog, clear, rain 3-4	
8th	E	E	56 57 50	Thunder, rain $\frac{1}{2}$	
9th	W	W	43 51 46	Clear	
10th	NW	W	44 55 50	Cloudy, clear	
11th	W	W	43 57 53	Clear cloudy,	
12th	W	W	43 57 53	Cloudy, clear	
13th	SW	SW	43 60 53	Clear	
14th	W	W	36 60 54	Clear	
15th	NE	W	40 57 47	Clear	
16th	N	NE	37 50 45	Frost, clear	
17th	W	W	40 55 45	Cloudy	
18th	NE	W	41 59 55	Clear, cloudy	
19th	W	W	45 58 54	Cloudy, clear	
20th	W	W	46 61 54	Cloudy, clear	

#### REVIEW OF THE TOBACCO & GRAIN MARKETS.

Reported for the American Farmer by J. W. & E. Reynolds.

Since our last monthly report, there has been effected large sales of tobacco—larger, perhaps, than has ever been known in the whole history of the trade—so that the stock now in first hands is very small indeed. This great activity in the market grows out of the fact, that there is now a fair prospect of things being so settled in Europe as to insure the establishment of peace, perhaps, for a long time. This is a fortunate state of things for our planters, and would be also for the general welfare

of Europe and the world, were it not brought about at the expense of liberty and freedom, the dearest rights of man:—the recollection of poor Hungary hangs about us.

The time for stripping has come again, or nearly so, and we would again call the attention of planters to the size of their bundles. This is a matter of more importance than most persons suppose; and hence the great inattention to the subject. The bundle of fine tobacco ought to be quite small, and larger in proportion to the inferiority of the quality, as the size of the bundles of a very common article is not of so much importance. Let the bundles be tied always with the best leaf, and cover the head entirely, when practicable.

We quote common dark crops and seconds at 2½ to 3½; good crop, 4 to 5; good and fine reds, 5½ to 5½; common ground leaf, brisk, at 34 to 35; fine do., 5½ to 5½.

Grain has fallen within a few days past, and we quote red wheat, 90c. to \$1.02; white do., 95 to \$1.07; do. for family flour, \$1.15. Rye, 56. Corn, old white, 54 to 58; yellow, 58 to 60; new white, 40 to 50c., according to dryness. Oats, 29 to 32c.

**Cattle.**—Supply rather short at the scales, this week, and prices ranged higher than last week—1,400 head offered; of which, 770 were sold to city butchers and packers, 220 left over, and 410 driven to Philadelphia. Prices, \$2.25 to 3.50, on the hoof, equal to \$4.50 a 6.75 net, averaging \$2.75 gross.

**Hogs.**—Supply large, but, in consequence of the mild weather, the market is languid. Sales at \$4 a 4.25, on the hoof.

**Whiskey.**—Demand limited; small sales at 28c. for bbls., and 27c. for hhd.

**FOREIGN.**—The news by the last steamer, the *Caledonian*, shows an advance of ½d. in cotton, in England, since the preceding arrival, and a tendency to firmness in the advance, occasioned by the recent advices from this country. The corn and wheat market was without change, but rather heavy, and former prices barely sustained. In tobacco, we learn that speculators were attracted to the article, though the advance insisted on by the holders had checked business, both in strips and leaf, but more enquiry was looked for shortly.

#### PLOUGHS! PLOUGHS!!

The subscriber is manufacturing Ploughs of various patterns and of different sizes; also Wheat Fans, Cylindrical Straw Cutters, Corn and Tobacco Cultivators, CORN SHELLERS, &c. Also,

**THRESHING MACHINES AND HORSE POWERS**—these latter are used by the following gentlemen, to whom reference is made, as to their superior value, viz: Messrs. T. Beard, The Beard, Dr. Watkins, J. T. Hodges, T. Welsh, W. Mackall, J. Inglehart, A. Sellman, R. Sellman, W. Hopkins, J. Kent, Geo. Wells, Geo. Gale, Dr. Fenwick, A. Franklin, J. C. Weems, of Anne Arundel county; G. W. Weems, J. T. Barber, R. B. Chew, W. Boswell, Y. Howes, of Calvert co., Md. Agent of Evans Davis, Baltimore co. for sale of the woodcock Plow. Pennsylvania Grain Cradles. CHAS. H. DRURY.

Gillingham Alley, entrance from Howard-st., near Pratt, mail and store, Hollingsworth-st. corner Pratt.

**NOTICE.**—Mr. John P. McElderry, Camden street, is Agent for the sale of Murray & Clark's MACHINERY.

#### PLOUGHS.

PROUTY & MEARS', Ruggles, Nourse & Mason's, Minor & Horton's, Chenoweth's, Davis', Woodcock's, Sinclair & Moore's, New York Ploughs, &c. &c., for sale by

E. WHITMAN, Jr.,  
Agricultural Warehouse and Seed Store,  
Cor. of Light and Pratt st., Baltimore.

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## To Planters, Farmers, Mill Owners and others.

MURRAY & CLARK;  
MILLWRIGHTS AND MACHINISTS,

**R**ESPECTFULLY inform the public that they are now established in Baltimore, Md., and ELIZABETH CITY, N. C., and are prepared to furnish all kinds of MILL-WORK, HOISTING MACHINES, CRANES and AGRICULTURAL MACHINERY, at the shortest notice, and as cheap as can be got elsewhere, such as Mill Patterns, Mill Castings, Wrought Iron Work, Brass Castings and Agricultural Machinery, such as Horse Powers, for all purposes, Thrashing Machines, Portable Grist Mills for hand or power, Grain Fans; Straw, Hay and Fodder Cutters, for hand or power, Corn Crushers, for hand or power, Grind Stones, Picks, Mattocks, Grubbing Hoes, Axes, Wrought Plows, and Plow Castings, also the far-famed FETTERBREW CORN SHELLETS, improved by Murray, that will shell from 300 to 700 barrels of Corn per day, and would refer to the following gentlemen, who have them in use.

*Perquimans Co., N. C.*—Edmond B. Skinner, Benj S. Skinner, Francis Nixon, Col. James Lee, A. C. Toms, H. N. Mahane, Thomas Newby, Dr. C. M. Ford, James M. Sumner, Esqrs.

*Halifax, N. C.*—Thomas P. Devereux, David Clark, Esqrs. *Pasquotank Co., N. C.*—William Glover, William H. Davis, Joseph H. Pool, John C. Barnes, George O. Pool, Robert Pendleton, Thomas F. Banks, William Charles, Edmond Perkins, James E. Weeks, Mark S. Sawyer, Thad. F. Banks, James L. Mullen, Esqrs.

*Chowan Co., N. C.*—James C. Johnston, Thomas D. Warren, Aug. Moore, Joshua Skinner, Esqrs.

*Bertie Co., N. C.*—John Devereux, Esq. *Camden Co., N. C.*—W. N. Gregory, Major Gregory, Wm. R. Abbott, Dr. F. N. Mullen, Esqrs.

We here take pleasure in giving the following Extract of a letter received on the 29th of September, 1849, from Thomas D. Warren, Esq., Endenton, Chowan Co., N. C.

DEAR SIR:—Your letter asking my opinion as to the performance of the *Horse Powers* and *Thrashers*—furnished me by you, was duly received; in answer, I am happy to say that they are very excellent Machines, and deserve all the praise that I can bestow upon them. The principle of the powers is good, and combines great velocity with easy draft—is simple and easily adjusted, which is a great desideratum to a farmer. I am highly pleased with their performance, and give them preference to any I have ever used or seen. As to Fans—I have one from Baltimore, one from New York, and several others, but none are equal to the one sent me by your partner, Mr. Clark. I shall order more from him of the same sort.

With respect, &c., I am yours,

THOS. D. WARREN.

MURRAY & CLARK:—The Fan spoken of above, is one of the same pattern that Mr. Hathaway wrote to us of, as having cleaned one thousand bushels of Wheat within one day.

The following is handed to us by Mr. A. W. Willett, who is now operating with two of our *Powers* and *Thrashers*.

DEAR SIR:—In answer to your inquiry about Machines, we would respectfully say to all those that are in want of Machines, that yours is the best we have seen—as it does not break the grain—leaves the straw in good condition—works easy, and thrashes as clean and as fast as any we have seen—and for durability, there is none better made.

Respectfully yours,

G. MYERS, JR.

JOHN CONNELLY, Manager for Capt. McBlair, HIRAM HAUFMAN, MOORE and HOOVER.

MR. A. W. WILLETT: Baltimore, 2d Oct., 1849.

Sir:—In reply to yours of 25th inst., I have much pleasure in stating that the thrashing done for me was highly satisfactory; the performance of your Machine appeared to be perfect.—Should I have more thrashing to do, and you were able to attend to it, I should employ you to do it.

Yours respectfully,

H. GELSTON.

Baltimore County, Md., Oct. 2d., 1849.

Having witnessed the operation of Mr. A. W. Willett's Thrashing Machine, I take pleasure in recommending it to any who may wish to employ or purchase such a Machine. This Machine made by Messrs. Murray & Clark, was employed by me for something less than two days and a half in getting out a crop of oats. In my judgment it performed its work thoroughly, and with sufficient rapidity—almost without friction, and what is unusual, without very little noise. The arrangement of the teeth is such as to prevent their flying out and endangering the men when any of them are broken by the accidental introduction of small stones or other hard substances.

SAM'L McCULLOH, JR., M. D.

About the *Hand Corn Shellers* which received the Premium at the late Fair of the Agricultural Society, that will shell and separate 50 barrels of corn per day, we would refer to the following gentlemen who have them in use. Joseph H. Pool, William Crawford, Joshua Stewart, William Temple, Esqrs., of Pasquotank County, N. C. and Nathan Halstead, Esq. of Camden County, N. C. A great number of these Shellers have been sent to Savannah and other places.

About *Portable Mills*, which we Manufacture for the different purposes of Grinding Wheat, Corn, Rye, Oats, Sugar, Coffee, Salt, Salt Petre, Red Lead, Chrome Ore, Magnesia, Alum Clay, Tartaric Acid, Cream Tartar, all kinds of Spices, Paints, Plaster, Coal and other purposes. The following gentlemen have them in use in the City of Baltimore. Mr. F. S. Cappel, Mr. William Davison, Baltimore Eagle Works, E. Stabler & Co., Messrs. Richtsime, Mr. Vanness, Mr. McNeal, Messrs. Powell and Rimby. The largest of this kind of Mills is now in operation by Steam Power at the Junction of the Macon and Georgia Rail Road, Grinding Corn and Wheat.

We also Manufacture superior *Bone Mills*, and would refer to P. S. Chappell, John Kettlewell and Wm. Davison, Esqrs.

Having served regular Apprenticeships to the Millwright Business, we feel assured that we can give perfect satisfaction to all who may favor us with their custom, either by day work, or in the performance of contracts, and will warrant all Grist, Saw, and other Mills, &c., propelled by Water, Steam, Wind or other Power, planned and erected by us, to operate well. Mill Work or other Machinery repaired at the shortest notice.

Nearly all the above gentlemen are acquainted with us as Millwrights. All orders thankfully received and promptly attended to.

MURRAY & CLARK, MILLWRIGHTS & MACHINISTS,  
No. 21 York street, near Light st., Baltimore.

Nov. 1, 1849.

**DUTCHES CO. BREED OF PIGS.**—The subscriber has on hand 40 growing Pigs of this favorite breed, 2 to 5 weeks old; also, one very superior Boar, 6 months old. Some of this breed of pigs were sold, at the late Exhibition at Baltimore, for \$50 per pair, 6 months old, and \$30 each for those one year old. I have engaged several pair of this breed, of next spring's stock, at \$30 per pair, at 8 weeks old, which is my regular price. I have realized from one of my sows and her offspring, in a little more than 12 months, \$431, including the prizes awarded in the State of New York, Pennsylvania and Maryland, including, also, two sales of the sow—the first time with 7 pigs with her, 5 weeks old, at \$119, and the second time she was sold for \$65, without any pigs. Orders addressed to the undersigned will be promptly attended to.

JOHN WILKINSON,

nov1

Agricultural Institute, Germantown, Pa.

## TO PLANTERS & FARMERS.

KENTISH & CO.'S PREPARED GUANO.

THE subscribers having been appointed Agents for the sale of the above Fertilizer, are ready to receive orders for the same at manufacturers' prices, one cent per pound. Terms cash—no charge for cartage.

Among many certificates, we refer to the following:

"I have used 2 or 3 Tons of your prepared Guano, last year, on corn, oats, potatoes, turnips and wheat—have used every description of manures as well as the imported Guano, and would give your preference to all of them for cheapness, durability, convenience; and it increased my crops double fold. I would recommend it strongly to all farmers and Gardeners. 22d May, 1849. [Signed] WM. MILLS, Leach Farm, Jamaica, L. I."

"It renovates the exhausted lands of the South, and on tobacco and corn it is invaluable. [Signed] KENTISH & CO."

This article contains a portion of *bone dust*, and not a particle of sand, dirt, &c. It can be used at all seasons and with one-third the labor of any other fertilizer. Its effects are visible many years. It destroys all insects, and for the poorest land requires but 450 pounds per acre. For particulars, see pamphlets at our office. MUNCASTER & DODGE, oct-3m Georgetown, D. C.

**THE "CARPENTER'S POINT FISHING SHORES" ARE OFFERED FOR RENT FOR THE SEASON OF 1850.**—These shores lie along the waters of the Chesapeake Bay and of the Northeast river, and to the advantages of situation add those of a complete set of Buildings and Sheds, and a long established custom of purchasers of fresh fish. Proposals will be received by S. Sands, Esq., Editor of the American Farmer, or by the subscriber. J. HOWARD McHENRY.

Ⓜ-The entire Carpenter's Point Property is offered for sale on very moderate terms. Apply as above. sep 1.



## CHICKERING'S PIANOS.

THE subscriber is sole Agent in Baltimore, for the sale of Chickering's celebrated IRON FRAMED GRAND & SQUARE PIANO FORTES, and is constantly receiving supplies from the factory in Boston, which are sold at the same prices as charged by Mr. Chickering.

Chickering's Pianos are unquestionably the best Instruments manufactured in the United States. In regard to superior quality of tone, touch, durability, and all the essential qualities of a Piano, they are admitted by the most eminent Pianists to be equal to Erard's, of Paris, or Broadwood's, of London. Although there are several factories in Boston and New York of high reputation, Mr. Chickering undoubtedly stands at the head, possessing eminent talent, skill, untiring industry and experience of some 35 years as a manufacturer of pianos, with abundant means to enable him to carry out his plans in producing the very best instruments.

Orders from the country, entrusted to the subscriber, either for Pianos, Music or any article in his line of business, will be faithfully executed.

oct-6t

F. D. RENTEN,  
181 Baltimore street.

**AGRICULTURAL IMPLEMENTS.—LABOR SAVING MACHINERY.**—GEORGE FAGE, Machinist & Manufacturer, Baltimore st. West of Schroeder st. Baltimore, is now prepared to supply Agriculturists and all others in want of Agricultural and Labor-saving MACHINERY, with any thing in his line. He can furnish Portable Saw Mills to go by steams, horse or water power; Lumber Wheels; Horse Powers of various sizes, ranging in price from \$85 to \$200, and each simple, strong and powerful. His Horse Power & Threshing Machine, he is prepared to supply at the low price of \$125 complete; the Threshing Machines without the horse power, according to size, at \$30, 40, 65 and \$75; Improved Seed and Corn Planter, Portable Tobacco Press; Portable Grist Mills complete, &c.

## LIME.

THE subscribers are prepared to furnish Building and Agricultural Lime at the depot on the Back Basin, corner of Eden and Lancaster sts., which they will warrant to give satisfaction, it being burnt from pure Alum Lime Stone, equal to any found in the United States. Orders may be left with WILLIAM ROBINSON, No. 15 Hollingsworth-street, near Pratt.

feb. 1-4t.

FELL &amp; ROBINSON City Block

**DUVALL & IGLEHART, GROCERS AND COMMISSION MERCHANTS,**  
No. 78 LIGHT STREET WHARF.

Invite the attention of their friends, and the public generally, to their large and general assortment of GROCERIES, embracing every article in that line of business, and which they will sell upon pleasing and liberal terms, and at the lowest prices. Any one in want of any article in their line will find it to their advantage to give them a call. They will also pay particular attention to the sale of all kinds of produce.

Baltimore, October 1, 1849.

2t

**SPLENDID COLORED DAGUERRETYPE PORTRAITS.**  
By C. W. PURCELL, (late operator for Broadbent & Cary),

No. 128 BALTIMORE STREET,

Over the American Office, and adjoining the Farmer Office.

HAVING a thorough knowledge of all the latest improvements in this beautiful art, Mr. Purcell feels a confidence in assuring the public that all pictures taken at his establishment shall combine a most correct likeness with the highest artistic skill. He will undertake to give the fullest satisfaction, or no charge will be made.

Ladies and gentlemen are requested to call at his rooms and examine his specimens.

sep 1-ly.

## Rushbrook Farm for Sale.

SITUATED Three Miles north-east of Towson town, Baltimore county, within 10 miles of this city, containing 450 acres, more or less; from 175 to 200 acres in cultivation. It is estimated that there are from 4 to 5000 cords of wood, consisting to a very great extent in chestnut rail timber—all the fields in cultivation have been heavily limed, the most of them at 100 bushels per acre. The above farm is newly and thoroughly fenced. The other improvements are, three new and excellent good sized log houses, and one extra size; also one extensive manager's house, having some 8 or 10 rooms; barn (called the three decker) 65 by 45 feet, just new, and having cost \$1500, and built in the best manner; corn, hen and other houses; smith shop, and kiln capable of burning 1500 bushels. This farm is undisturbed; land very kind and susceptible of every high improvement. There is a fine young peach orchard. City property, or stocks will be taken in exchange at a fair valuation. For terms and other particulars, apply to

SAMUEL SANDS,  
Office American Farmer.

sep 1

## Baltimore Fire Insurance Company.

No. 24 South Street, Baltimore.

THIS old established Company (incorporated by the legislature of Maryland, 1807,) continues to INSURE AGAINST LOSS OR DAMAGE BY FIRE, in the city or country, on the various descriptions of property: On Farms, Barns, Granaries, &c.—on Dwelling Houses, Storehouses and Warehouses,—on Merchandise—on Country Produce—on Household Furniture—on Vessels Building, on Vessels in Port, and on Cargoes, &c. &c.

The Board of Directors is composed of the following gentlemen: J. I. COHEN, Jr., President.

William Frick,	David S. Wilson,
Robert A. Taylor,	Wm. F. Worthington,
William G. Harrison,	Jas. A. Sangston,
Samuel T. Thompson,	William Gilmore,
George R. Vickers,	J. Pennington,
F. W. Alricks,	Joseph King, Jr.
S. Owings Hoffman,	

For forms of application, and any other information, apply at the office, No. 24 SOUTH STREET, where all cases are immediately attended to. Insurance can also be effected for any length of time that the applicant may desire.

\*Applications for insurance in the country can be made by letter direct, or through the medium of correspondents of the party, residing in Baltimore. Answers can be promptly given, with all relative information which may be desired. Letters to be addressed to

FRED'K WOODWORTH, Sec'y.

Baltimore, September, 1849.

sep 1

## AGENCY

For the Purchase and Sale of Improved Breeds of CATTLE, SHEEP, SWINE, &c.

I WISH to remind the farmers and planters of the Southern and Western States, that I still continue to purchase and sell improved Stock,—such as Cattle, Sheep, Swine and Poultry, of the different kinds and breeds, at a very reasonable commission. They will be carefully shipped, or sent away as ordered.

All letters, post paid, addressed to me, at Philadelphia, will be attended to without delay.

sep 1-6t

AARON CLEMENT.

BONE-DUST AND POUDETTE ESTABLISHMENT.

On Harris' Creek, at Canton, Baltimore.

THOMAS BAYNES, continues the manufacture of POUDETTE, and is prepared to supply any orders for the same.—The article manufactured by him, will be found probably more valuable than any made in the Eastern cities. His BONE-DUST weighs from 55 to 60 lbs. to the bushel, and is as fine as any article sold in this market. Price of Bone Dust, 55 cents per bushel. Poudrette, \$1.20 per barrel. Persons sending their carts or wagons to the factory, can obtain the Poudrette at 30 cents per bushel.

Any orders left at the factory, or with Mr. S. SANDS, editor of the "Farmer," at the State Agricultural Society's Rooms, will receive immediate attention. Terms, cash.

my 1-tf.

CHINA BOAR FOR SALE.—The subscriber will sell his imported China Boar, now eighteen months old. He combines all the distinctive excellencies of his breed, and offers a desirable opportunity for an improving cross. Apply to Mr. Sands, or to

novl

Near Elk Ridge Landing, Md.

STRAWBERRY PLANTS.—For sale, a choice collection of Strawberry Plants, namely, large Hautboy and Hovey Seedlings, and also a new variety of the largest kind, imported from England in '47, Marquis of Lansdown, premium as for size and quality, see the publication of the Baltimore Sun of June 16, 1848. The above can be had of THOMAS KEHOE, Govanstown, or at the office of the American Farmer. novl

FOR SALE—100 bushels of BONE SHAVINGS—by

feb-1t

R. BALL,  
East Falls Avenue, near the Bridge, Baltimore.

A. G. MOTT, MANUFACTURER OF FLOWS, HARROWS, CULTIVATORS, GRAIN CRADLES, WHEAT FANS, CORN SHELLERS, CYLINDRICAL STRAW CUTTERS, &c. &c.

Flow Castings, of the New York composition chilled metal, always on hand, and old implements repaired, at No 8 KENDOR STREET, adjoining the Bel-air Market, Baltimore. Janl

PIERSON'S IMPROVED WHEAT DRILL. Price, \$100.

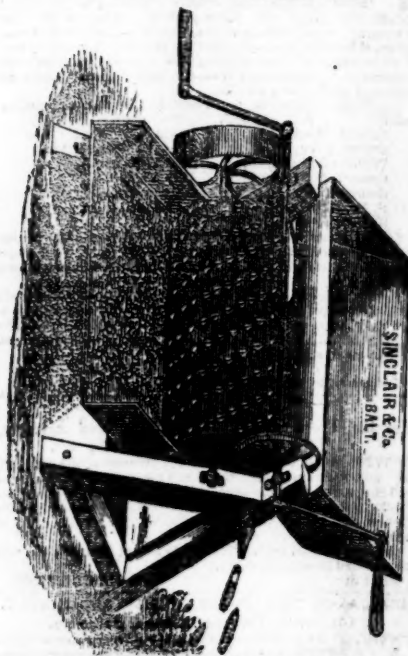
oct

For sale by

E. WHITMAN, Jr.,

55 Light street, Baltimore, Md.

## AGRICULTURAL MACHINERY FOR FALL AND WINTER USE.



R. SINCLAIR, Jr. & Co.

No. 62, LIGHT STREET, BALTIMORE.

**OFFER FOR SALE, the following IMPROVED MACHINERY—viz:**

Sinclair & Co's CYLINDRICAL STRAW CUTTERS—warranted—the most perfect machine of the kind in this country—there are 4 sizes made and constructed, both for manual and horse power.

Sinclair & Co's CORN STALK CUTTERS with Lacerators attached, which reduce the stalk and fodder to the finest state for stall feeding.

Common STRAW Cutters of various sorts and at low prices. Sinclair & Co's VIRGINIA CORN SHELLERS, made to be worked by hand or horse power; capacity 1000 bush. pr. day.

Sinclair & Co's Columbiad, Goldsborough, and Atee CORN SHELLERS, for horse power—capacity 1000 to 1500 bushels per day.

Sinclair & Co's Eagle Corn Shellers, made with single and double spouts, for hand power—capacity 150 to 250 bushels.

Sinclair & Co's single and double Iron spout Corn Shellers,—a new and excellent machine for hand power—capacity same as the Eagle.

Sinclair & Co's CORN & COB CRUSHERS—a most valuable and perfect machine, price \$30, and capacity 30 bushels per day. (G) This machine is also admirably adapted for crushing corn, oats, &c. for stall feeding.

Sinclair & Co's HORSE POWERS, 4 sizes, and made for 1 or 12 horse power.

Sinclair & Co's Rail way or Endless Chain Powers, made with late valuable improvements.

Sinclair & Co's Improved Threshing Machines, 4 sizes.

—ALSO—

Wheat Screens,\* Corn and Wheat Fanning Mills, Field Rollers, Clover threshing and cleaning machines, Plows for flaking, seeding, &c. A large and superior assortment Sausage Cutters and Stuffers, Plow and Machine Castings, and in store almost every Plow, Agricultural Machine and Tool wanted by the farmer. The assortment of

FIELD AND GARDEN SEEDS,

Now in store, is not surpassed for extent, variety or quality, by any seed establishment in this country.

SINCLAIR & CO.

dec] Agricultural Implement Makers and Seedsmen.

\*The Wheat Fan we now make has undergone very important improvements, and so constructed that they not only chaff with great rapidity, but cleanse the wheat entirely from all weed seeds, and put it in the finest order for market or seed.

## TO FARMERS! NORTH-WESTERN REPOSITORY! OF AGRICULTURAL IMPLEMENTS!! PLOUGHS.



MAXFIELD, MOTT & Co.

Would call the attention of Farmers, particularly, to their extensive stock of Ploughs, of new construction and pattern, many of which have taken the highest premiums in this and other States, where they have been exhibited, as well for their new and beautiful construction, as for their intrinsic merit in ploughing. We mention, in part, the *DELAWARE* or *MOORE & CHAMBERLAIN PLOUGH*, which has fully proven its excellence and superiority above all others, having taken the *First Premiums* at the *Montgomery County Agricultural Exhibition*, held in September last, both for its superior construction and draught, where prejudice arrayed its strongest force of opposition, but the disinterested judges after witnessing its performances, pronounced it to be unequalled.

Again, at the Fair held in this city during the 10th, 11th and 12th days of October last, it fully maintained its well deserved reputation of being a *ne plus ultra*; causing the withdrawal of those Ploughs from the trial which professed to be of the 1st class, in order to save the reputation already acquired—they however, were exhibited in competition for the premium for best construction and principle, and "when weighed in the balances were found wanting," the *DELAWARE* proving again victorious. And to yet another trial was it subjected, and again fully answered all that was required, and confirmed the previous judgments that were passed upon it. At the Fair held in Easton, Md., in Oct. and Nov. it received the *First Premium* for best construction, and the *Premium for Ploughing*.

We deem it unnecessary to cite further proof of the excellence and superiority of this plough over any other now in use, but leave those desirous of purchasing to judge of its merit by its performances.

We would guard the farmers against those persons advertising the *Moore & Chamberlain Plough*, as we are the sole agents for the manufacturing and sale of the same in the State of Maryland.

(G)—All orders for this or any other Plough, (having a complete assortment of all descriptions) will be promptly attended to by addressing

MAXFIELD, MOTT & CO.  
No. 97 North Faca street, 3 doors south of Franklin,  
dec] BALTIMORE.

## NOTICE!!

HAVING attended several County Fairs, and also the great State Fair, we deem it our duty to notify the farmers generally, of the success with which we have met, and in order that they may not be deceived in supposing that we attended those in which our name was not mentioned—we will, therefore, name those at which we were present, viz:

- 1st—The Montgomery Co. Fair, held September, 1849.
- 2d—The State Fair, held in Baltimore, October, 1849.
- 3d—The Talbot Co. Fair, held in Easton, Oct. & Nov. 1849.

## LIST OF PREMIUMS RECEIVED.

- 1st Premium of \$20, for best display of Implements.
- 1st do for best constructed plough, both 1 and 2 horse.
- 1st do do Ploughing.
- 1st do do Straw Cutter.
- 1st do do Cultivator—something new.
- 1st do do Harrow.
- 1st do do Fans.

Being experienced men in the various practical parts of the business, we think ourselves well qualified to give satisfaction—we warrant our work to be of the best materials and workmanship, and only request a call, in order to convince the farmer of the truth of the assertion.

(G)—All orders promptly attended to, and Implements delivered to any part of the city free of charge.

MAXFIELD, MOTT & CO.

No. 97 North Faca street, Baltimore.

## WHEAT FANS.

GRANT'S, Ba mborough's, Strong's, Rice's, Hayford's, and all good Fans will be kept for sale by us, this season, as as low as can be bought in the State.

E. WHITMAN,

myl Agricultural Warehouse and Seed Store,  
Corner of Light and Pratt street, Baltimore.

### "CHAPPELL'S FERTILIZER vs. STATE CHEMIST."

In the November No. of this journal, I published a "card," stating that I should show, by proof in my possession, that the accusation of error in the analysis of Chappell's Fertilizer, by Dr. Higgins, as published in the May number of the American Farmer, could be sustained. This testimony I now submit, attached to this communication.

I wish, in justice to myself, to make a few remarks and statements, that all who may have taken any interest in this controversy, may have a proper and full understanding of the whole affair. I regret the necessity of thus appearing before the public; but I cannot permit the report of the committee to go forth without my defence appearing also.

Previously to the late meeting of the State Agricultural Society, I had been informed, indirectly, that the committee intended merely to submit the analyses of Dr. Stewart and Dr. Muse, without expressing any opinion of their own, leaving the public to judge for themselves. Had this course been adopted, I should have been satisfied to let the matter drop, and had concluded to do so. I felt perfectly satisfied to let the experiments now making on wheat, in this and adjoining States, decide the fate of the article, fully confiding in the result; but, finding that the committee have, in their report, sustained the State chemist, without calling on me for my proof, it has become a matter of serious importance to me, to remove, as far as possible, any unfavorable impressions their report is calculated to produce. Why the committee changed their mind as to what they would say in their report, is not for me now to say or surmise.

My friends cannot be satisfied with the mode adopted by the committee to ascertain the truth or falsity of my charge. As I had, formally, called the attention of the Society to the subject, and had, in my letter, promised "every facility" for a thorough investigation, of course I had expected to be called on to "produce my evidence." In expectation of this course of procedure, I addressed a letter to the Chairman of the Committee, soon after their appointment, and therein suggested that, as the Society had granted "scientific aid" to assist them in their investigations, that the committee select two chemists of known chemical attainments, to call on me, and with whom I would communicate freely, and unreservedly, and point out exactly wherein Dr. Higgins' errors consisted—that I would show the specifications under which Letters Patent had been obtained—that I would take them to my factory, and let them inspect the materials used in its manufacture—they could see my mode of mixing and blending the articles together, to secure uniformity in each barrel—that they could, if thought necessary, examine my workmen, under oath—that I could, by these means, convince them that two important articles, easy of detection by the usual chemical tests, entered into every barrel of the Fertilizer which leaves our factory, and which had not been reported by the State chemist, as constituents of the compound. This having been proven to their satisfaction, the analysis of Dr. Higgins could not, of course, be correct, and I should expect a report accordingly—that, if I failed, by these means, to substantiate the charge, I was willing, then, to submit to any other course they might suggest. From that day to this, my letter has remained unnoticed, and I have had no intercourse, directly or indirectly, with them. I have, therefore, had no chance of defending myself, nor to show what injury I had sustained by the published analysis of the State chemist. I leave the reader to

judge whether this proposition was not honorable and just, and might have been acceded to by the committee, and yet do justice to the accused party. In justice to the chairman, Col. Capron, I will state, that, in an interview with him, on another subject, he casually remarked, that it had been suggested, and desired, by a part of the committee, to conduct their investigations independent of me altogether; also to Mr. Earle, who told me that, before the committee made up their report, they would have an interview with me on the subject. His absence from the city, during the meetings of the Society, no doubt, was the cause why this promise was not fulfilled. Now, under these circumstances, and as the committee have seen fit to sustain the State chemist, by having the article analyzed by two other chemists, as a test for the correctness of the one made by Dr. Higgins, it becomes me, in justice to myself, to *renew the charge*, and to show, by such testimony as would be received in any court of justice, that the statement of error, as first made, in my letter to the State Society, can be sustained.

The samples furnished for analysis, to Dr. Stewart and Dr. Muse, came out of the same barrel. This was admitted by Dr. Wharton, one of the committee, at the time the report was presented, in answer to a question from the undersigned.

On hearing the report read by Dr. Wharton, I was taken by surprise to find that the analysis, so very dissimilar in every item, should be considered and used as evidence to prove the one made by Dr. Higgins. I at once stated to the Society, and now repeat (and appeal to every chemist who may read this article), that the two analyses did not agree sufficiently to justify the conclusion of the committee, and would be so pronounced by every chemist in the U. States, without a single exception—that there was a greater difference between the two analyses than a correct analysis of a soil that would yield 30 or 40 bushels of wheat to the acre, and a soil entirely barren.

The fact being admitted, that the two samples, furnished for analyses, came out of the same barrel, and they not agreeing with that made by the State Chemist, is conclusive proof, that the difference is not in the article, but in the analyses.

Had Dr. Stewart and Dr. Muse, been selected by the committee to call on me, as proposed in my letter to them, I have no doubt, but that I could have convinced them, more satisfactorily to their own minds, than by chemical analyses, that all the materials which I state in my printed circulars, as forming the salts known as Chappell's Fertilizer, really do, enter into that "apparently mysterious" compound. It would have given me pleasure to show them the articles I use, my manner of combining, and the care taken to secure uniformity, &c.; had this course been adopted, it would have secured a correct judgment, and the report of the committee would consequently have been very different. Had I not been prepared to show, wherein the errors of Dr. Higgins' analyses consisted, I certainly never would have sent the letter I did to the Society, nor to the committee, soliciting their investigation.

Having, as I think, been *unkindly* treated, and standing, as I do, on the foundation of immutable truth, and having a consciousness of my own integrity, I now make this appeal, trusting, that what I now say in this communication will be received in the same spirit in which it is written. It is a matter which does not concern me *only*, but every friend of chemical science, as an adjunct to agricultural inves-

tigations. It certainly is important to the farming interests of the State, to ascertain, whether the "State Chemist" had or had not analysed the Fertilizer *correctly*. The State had incurred a heavy expense by the appointment of an agricultural Chemist, and the cause of agriculture could only be promoted, just in proportion to the capacity of the officer selected, correctly to analyse a compound submitted to his research; if not capable of detecting all the materials in a compost, the constituents of which were previously known, what reliance could be placed in his official acts, as an analyst of the soil, &c. If two substances forming  $\frac{1}{2}$  the weight of the article analysed, escapes the notice of an analyser, how could his analyses be taken as a test for a manure, or any thing else; an analyses if incorrectly made, is calculated to do great harm; the qualifications of the person to be selected as State Agricultural Chemist should be a matter of serious enquiry, both by the appointing and confirming powers of the State. Previously to his receiving the appointment, a compound should be put together by some scientific person or persons, and portions of it submitted to the candidates, for analyses; the party which could most correctly analyse such a compound, should be selected, other qualifications being equal. In Europe, much greater care is taken to ascertain the acquirements of persons appointed for scientific investigations, than in this country. Chemistry is a department of science of ascertained fixed laws; a man may be a chemist and know but little about analysing; it is a separate branch of the science, and can only be attained by long and persevering industry, under tutors of tried experience and acumen, with proper apparatus and pure chemical tests; to analyse correctly requires not only a thorough acquaintance with chemical laws and affinities, but also a knowledge of the proper means and agents to be used to secure a correct result. There is no province of science more certain, nor difficult of attainment; "a half knowledge," as Freseneus remarks (in his work on analyses) "is worse than no knowledge at all."

I take this opportunity in repelling the accusation which has been circulated against me, viz., that I do not believe in chemical analyses; this is not true; I am satisfied that great advantages can be derived from correct analyses of soils, and many other substances, but the advantage depends altogether on their accuracy.

I regret that I am compelled thus to write; it would have been more congenial with my feelings to have dropped the matter after the report of the committee had been given. For the committee to say that the slight discrepancy grows out of the difference in the samples, when they admit that they were taken out of the same barrel, is a paradox which, for one, I cannot understand. Their report has given me no choice: I must either submit to be branded, as having brought a charge against a State officer, without an ability to sustain it, with the impression left on the minds of all who read or hear of their report, that what I have stated, in my pamphlet, as the constituents of the fertilizer, do not exist therein, but that it is composed of "sand" and other worthless materials—I say I must either submit quietly to such inferences, or thus defend myself. I am perfectly willing to let my character rest on the results of the experiments now making on the wheat crop. Had the season for oats, corn, &c., this year, been such as to give a fair trial of the salts, its failure in some cases could not have been used, by the friends of Dr. Higgins, as evidence that he had detected a grand

imposition. If I can show it to be uniform in quality, and always containing the same materials in like quantities, certainly, then, some respect can be paid to the certificates I have given as to its fertilizing properties.

I have been represented as putting 27 parts of sand in my agricultural salts. The farmers have been told, through the columns of this journal, that they have sufficient sand on their farms without paying freight, &c. on my salts. I have been looked on with suspicion, and treated (by some) as a culprit. I now ask, have I not, under these circumstances, justifiable ground for the appearance of this communication. The whole article from the pen of Dr. Higgins, as published in the May No. of the American Farmer, appears as intended to produce this effect.

I have but a few words to say in reference to the "test" analyses. Dr. Stewart finds less than one per cent of ammonia, and Dr. Muse 7 per cent of salts of ammonia. Pray tell me, which is correct? I ask the reader to cast his eye over the two analyses, and tell me wherein they do agree; for myself, I am at a loss to say.

I do not consider it of much importance to the farmer to know what materials enter into the manure he uses; all he wishes to know is, will it produce the desired effect; will it make his wheat, corn and tobacco grow in sufficiently increased quantities as to justify him in the outlay of money. "Will it pay?" says the farmer. Equally unnecessary is it for him to know what materials or quantities I use in compounding my fertilizer. I have not, therefore, invited him out to my factory. I could so inform him, and so act—I could represent the fertilizer as containing 4 times as much salts of ammonia (and other soluble salts) as it really does contain—I could say that I cart load of it possessed as much virtue as 1,000 cart loads of stable manure—I could show the generating of ammonia, and exhibit many things which have nothing to do with the composition of the salts—I could do all this, and what good would result. Many, no doubt, would believe what they see, and cry, "no mystery, no mystery!" and I might, thereby, secure some sales. If the fertilizer cannot be sustained without a resort to such deceptive means, it may die, and be forgotten, and all prospect of gain, or profit, may perish with it. My mode of doing business is very different; and any farmer who may feel sufficient interest in the matter to make the enquiry of those who know me (and not interested in the sale of any other article), will find this to be true. The article, as now prepared by me, is as faithfully compounded as ever; and if there is any confidence to be placed in the "truism," "that the same cause, under the same circumstances, will always produce the same effects," it is applicable to the fertilizer manufactured by the undersigned.

Regarding the unsuccessful use of our salts on the spring sown grains, so much talked of, I have a few words to say. The season, for these crops, has been unusually unpropitious for the successful use of our salts, and every other description of manure. Under these "circumstances," its "effects" could not have been fairly tested, as moisture is absolutely necessary for their solution. This year, the drought has been almost universal, over the State; and no opinion can be formed of what it would do under other "circumstances." In sections where they have had sufficient rain, and the article applied in sufficient quantity, the results have proved it to be as usefully applied as to the wheat crop of which I have given respectable evidence in the pub-



lished certificates of those who used it; and I shall be able to show, hereafter, as respectable testimony of its favorable action on corn, oats, potatoes, &c., as I have before given of its benefit to wheat.

Experience has shown, that when applied as a top dressing on wheat, to secure an additional yield of grain, it should be put on as early as possible in the year, say January to middle of March—the sooner the better, so as to give the early rains an opportunity of dissolving the salts. Several, who used it this year, early, derived great advantage and profit in the increased yield of wheat, others, who put it on "too late" though they did not derive any advantage in the yield of grain, now testify to the greatly increased crop of clover secured by its use.

I have already received a number of letters and verbal accounts from those who (were not frightened off by the State Chemist, and interested persons) have purchased this fall for their wheat crop—all speak of the very fine effect it has already had on their wheat. One, who left a "land" says he can see the difference as far as the eye can reach, another, that his wheat looks better where he put "Chappell's Fertilizer" than where he put the best Peruvian guano, at the same cost per acre; another, that if his field on which he used the fertilizer continues to improve (it now appearing much better than an adjoining field), he will want 100 barrels the next year; another, that his field where he put the salts looks "so fine," that he can hardly believe that so small a quantity of "such stuff" could produce "such a benefit."

I also know of a gentleman, who has recently sold his farm in Baltimore Co. for over \$10,000, and his next neighbor tells me that he is satisfied "the fertilizer sold it"—that a portion of the farm which he had sold to him, 3 years ago, and, for cultivation, not worth \$5 per acre, is now beautifully set in clover and timothy, the result of our salts. The gentleman referred to has been using our fertilizer for two years, and has purchased about 200 barrels, at different times. These are some only of the "practical results;" others will be collected and presented in the spring circular, when I expect to surprise the farmers as much as the report of the committee surprised me, that a compound, containing  $\frac{1}{2}$  sand, and 1 per cent of ammonia, could produce such "surprising" results.

I say nothing, at present, of other articles uniformly used, as constituents of the Fertilizer. Had Dr. Higgins discovered the 16 per ct. of sulphate of lime, put regularly into the compost, and another portion of the same article, formed by the action of the sulphuric acid on the bones—had he also detected the silicates of lime, magnesia, alumina, and potash, as stated in the printed circular, as contained therein—there would have been but little sand left.

I now add the testimony of my workmen, showing my mode of putting the articles together, and thereby showing the presence of two important constituents uniformly used in its manufacture; not detected by the State Chemist.

Dec. 1, 1849.

P. S. CHAPPELL.

This is to certify, that I superintended the chemical factory of my father, where "Chappell's Fertilizer" is prepared, and I know, from personal inspection of the materials used as constituents in its manufacture, that not less than 10 per ct. of sulphuric acid and 16 per ct. of sulphate of lime enters into every barrel that leaves the factory—that the mode of mixing the materials together is such that it is

impossible for any analysis of the article to be correct unless at least that quantity of these two articles be detected therein. Besides the sulphate of lime put into every compost, as above stated, there is the same article formed by the action of the sulphuric acid on the bones.

P. STOCKTON CHAPPELL.

State of Maryland, City of Baltimore, to wit:

On this 27th day of November, 1849, before the subscriber, one of the Justices of the Peace of the State of Maryland, in and for the City of Baltimore, personally appeared P. Stockton Chappell, and made oath, on the Holy Evangelical of Almighty God, that the matters and facts set forth in the above certificate are true. Sworn to before

A. H. PENINGTON.

The undersigned having superintended the men engaged in the manufacture of "Chappell's Fertilizer" since August, 1848, hereby certifies, that the mode as described above for mixing the materials which form the constituents of that compound is correct, as far as it can be described on paper. All the materials are put together under my direction and inspection, from a written memorandum furnished to me by Dr. Chappell. The care taken in the mixing of the materials together, I have no doubt secures uniformity in every barrel; and, from long experience, I am perfectly satisfied that no improvement can be made in the mode of combining the materials together.

I further certify, that in every pile thus made, not less than 16 per ct. of sulphate of lime and 10 per ct. of oil vitriol (used in dissolving the bones) enters into the composition—that the materials used have, from the first, been the same, and put together in like proportions, as far as possible—that such is the uniformity of each pile made to contain 120 barrels, that seldom the pile runs over more than one barrel—that the materials are so intimately and thoroughly put together, that I am certain no barrel ever left the factory which did not contain the quantities of oil vitriol and sulphate of lime above stated.

JOHN PRIDGEON.

State of Maryland, City of Baltimore, to wit:

On this 27th day of November, 1849, before the subscriber, one of the Justices of the Peace of the State of Maryland, in and for the City of Baltimore, personally appeared John Pridgeon, and made oath, on the Holy Evangelical of Almighty God, that the matters and facts stated in the within paper is true. Sworn to before

A. H. PENINGTON.

Mode of combining and blending "Chappell's Fertilizer," so as to secure the proper mixing together of the materials and uniformity in each barrel:

In making a compost pile for 120 barrels, the materials are conveyed to the shed in which they are combined, in wheel barrows, holding exactly one barrel. They are deposited in layers, one above the other. The pile thus made is then trimmed around the edges, cut down perpendicularly, and the materials thus cut off are thrown on top, so that the pile, viewed from the end, has the appearance of an inverted letter  $\gamma$ . Two men then commence, one on either side of the pile, and cut it down, perpendicularly, with shovels, and break and mix the materials together with the back of large shovels. It is then thrown into another pile, when two other men again handle it with shovels, and more intimately mix the ingredients by rubbing them together on a board,

with the back of the shovel; these two men pass it to another pile, where it is taken, by two men, and passed through an half inch sieve, and then put in to barrels and weighed. Another pile is never commenced until the first is put into barrels.

The quantity of each material is the same in each compost pile, being put therein under the direction of the superintendent, Mr. Pridgeon, from a written paper which he keeps. Every care is taken to secure uniformity, and that the materials shall be properly mixed. No ashes, coal or sand are used.

NICHOLAS HOOK,  
OWEN McCAUL,  
ALEX. McCLAIN.

State of Maryland, City of Baltimore, to wit:

On this 27th day of November, 1849, before the subscriber, one of the Justices of the Peace of the State of Maryland, in and for the City of Baltimore, personally appeared Nicholas Hook, Owen McCaul and Alexander McClain, and severally made oath, on the Holy Evangelical of Almighty God, that the matters and facts set forth in the above paper is true. Sworn to before A. H. PENNINGTON.

Dec. 1, 1849.

#### PREMIUM WHEAT FANS.

WE would remind those in want of FANS, that we are now manufacturing our new and superior SAIL ACTING Fan, and feel called upon to state, that after the competition at the State Fair, held in Baltimore, October, 1849, in which we were not successful, that we made all necessary alterations and again entered into the contest at the Talbot Co. Fair, against the same Fans which took the premium at the State Fair, and we are happy to inform our friends and the public generally, that we had the honor to come off victorious in the very neighborhood where our Fan was a stranger, and the other favorably known among the farmers.

We would also call the attention to the price of our Fans, which we warrant of the best materials and workmanship.

Large size, \$30

Small size, \$25.

MAXFIELD, MOTT & CO.

decl No. 97 N. Paca st. 3 doors south of Franklin st.

#### LAND FOR SALE.

THE subscriber offers for sale THREE HUNDRED ACRES of Land, in Westmoreland county, Virginia. This land lies immediately upon the Nomoni river, is of good soil, and possesses every possible advantage for improvement. Upon the farm upon which the subscriber resides, there is an inexhaustible deposit of oyster shells, to which the purchaser will have free access for all purposes of manuring; and the distance to haul the shells would not exceed one and a half miles to the farthest portion of his land. There is a plenty of Woodland attached for all purposes of the farm, and an abundance of scrap wood, to burn lime enough to manure the whole body of arable land.

There are "no improvements" upon the premises; but a most beautiful situation for a dwelling. This situation is remarkably healthy—much more so than is usually the case in the "tide water" section of Virginia. Terms, \$3,000, with any indulgence, by securing the money, and paying interest. All communications post paid. Address

LANDON C. BERKELEY.

Rich's Store P. O., West Co., Va. d 1-4t.

#### Peach and other Fruit Trees For Sale.

The subscriber, appointed Agent by the Proprietor, Mr. John Perkins, of the Fair View Nurseries, New Jersey, offers for sale the CHOICEST VARIETIES OF PEACH TREES, ripening in succession from the Earliest to the Latest; the name of some are—Algier's Winter, Tooth's Early Red, Early York, Extra Delaware Free, Late Heath Free Stone, Late Heath Cling, Lemon Cling, Ward's Late Free Stone, Late Yellow Free Stone, Old Mixon Cling, Perkins's Seedling, Red Bare Ripe, Red Cheek Malaga Stone, Rose Peach, Bodman's Cling, Late Delaware Free Stone, Smack's Cling, Tippecanoe, Scott's Imperial, Variegated Free, Walters' Early Washington Peach, Reeves' Favorite, Patterson's Seedling. The Fruit Trees are all incultured or grafted with the best varieties now cultivated for the market. Trees will be carefully packed. Also, Apple, Pear, Plum, Cherry, Apricot, Nectarine, and a fine lot of Ornamental Trees and Shrubbery, such as Linden Trees, Silver Maple, Horse Chestnut and Weeping Willow. d 1-1t JOHN ALLEN, City Block.



FARMERS who are in want of the best **THRESHING MACHINES**, will please notice that the First Premium of \$10 was awarded to E. Whitman's WROUGHT IRON RAILWAY HORSE POWER. Not less than 5000 of these Powers are now in use for driving various kinds of Machinery. As evidence of the superiority of these machines, it is well known that manufacturers who strenuously opposed them for many years, are now trying to deceive the public with a spurious article, made by inexperienced men to imitate mine, but they are imperfect and entirely a different article from the original E. Whitman's Wrought Iron Railway Horsepower, which can only be had by applying direct to

E. WHITMAN, Jr., cor. Light and Pratt streets, Balt. d 1

FARMERS who desire to procure the best and most approved Farming IMPLEMENTS, will please notice that, at the Maryland State Fair, held in Baltimore, October, 1849, the first Premium of \$20 was again awarded to me for the largest and best display of Agricultural Implements. This being the largest and best display of implements ever exhibited in the United States, I feel much honored by the award of such a premium, and shall hope to satisfy all who patronize me that the committee came to a just conclusion in the above award.

E. WHITMAN, Jr., Cor. Light and Pratt st., Baltimore. d 1

#### WHEAT FANS,

WARRANTED superior to any in the United States, and have also been introduced in England, with great success. We have all the sizes of

Barnborough's Premium Wheat Fan  
Grant's " "  
Rice's " "  
Strong's " "  
The Boston " "  
Clinton and other " "  
Prices, from \$20 to \$40. E. WHITMAN, Jr. d 1

#### 2000 PREMIUM FLOUGHS on hand

and for sale by the subscriber.  
Prouty & Mear's Plough, all sizes, do  
Roggies, Nourse & Mason's Plough, do  
Minor & Horton do do  
Eagle do do  
Moore & Chamberlain do do  
Wiley do do  
Davis do do  
Chenoweth do do  
E. WHITMAN, Jr. d 1

500 Whitman's Premium Patent CORN SHELLERS will be offered for sale this fall and winter; all of which are made by him, and guaranteed to shell cleaner and better, and break less corn, than any other sheller now in use. Retail price of single Sheller, \$16; double, \$15, \$17 and \$18. Also, the old fashioned Plate Sheller, \$16; the Virginia Sheller, \$30; Smith's Sheller (large size), \$50. For sale by E. WHITMAN, Jr. d 1

KENTISH & CO.'S PREPARED GUANO for sale, in any quantities, at New York prices, by E. WHITMAN, Jr. d 1

ROYER'S CORNSTALK CUTTER AND GRINDER, which received the first premium at the Maryland State Fair, October, 1849, is now for sale by E. WHITMAN, Jr. Price, \$30, and warranted perfect in its operation. d 1

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